United States Department of Agriculture

Natural
Resources
Conservation
Service

Washington Water Supply Outlook Report March 1, 2008

Water Supply Outlook Reports
and
Federal - State – Private Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

Washington
Water Supply Outlook

March 2008

General Outlook

Short of the bodacious storms during the first week in February the month was relatively dry with mostly below average rainfall across the state. Notably the only areas with above average precipitation were the Central Puget Sound and Upper Yakima basins which coincidently also received the heaviest snowfall, closing all three main mountain passes for days on end. Low elevation snow remains a large factor in keeping the overall basin averages high. The Olympic Peninsula received the least amount of precipitation at only 50% of average for the month. Regardless of a dry month, snowpacks remain at near to well above average. Short term weather forecasts indicate seasonally normal swings from dry to wet and back to dry conditions through this month. Long term forecast confidence indicates a continuation of a moderate La Nina, bringing above normal temperatures and equal chances for above, below or normal precipitation for the March-April-May period.

Snowpack

The March 1 statewide SNOTEL readings were 134% of average. The Kettle and Okanogan rivers snow surveys reported the lowest readings at 90% of average. Readings in the Cedar River Basin in King County reported the highest at 219% of average. Westside averages from SNOTEL, and March 1 snow surveys, included the North Puget Sound river basins with 131% of average, the Central Puget river basins with 194%, and the Lewis-Cowlitz basins with 152% of average. Snowpack along the east slopes of the Cascade Mountains included the Yakima area with 123% and the Wenatchee area with 92%. Snowpack in the Spokane River Basin was at 136% and the Walla Walla River Basin had 134% of average. Maximum snow cover in Washington was verified at Martin Lake AM near Mt. Baker, with water content of 84.6 inches. The average for this site is 61.9 inches. The highest average in the state was at S.F. Thunder Creek AM with 355% of average. (Indicates a feb 1 – mar 1 decline)

BASIN	PERCENT OF LAST YEAR	PERCENT OF AVERAGE
Spokane	138	137
Newman Lake	159	158
Pend Oreille	123	108
Okanogan	83	(90)
Methow	85	(97)
Conconully Lake	80	(96)
Wenatchee	93	(104)
Chelan	90	94
Upper Yakima	108	131
Lower Yakima	106	115
Ahtanum Creek	107	108
Walla Walla	141	134
Lower Snake	147	118
Cowlitz	121	144
Lewis	130	161
White	105	(113)
Green	126	157
Puyallup	126	(136)
Cedar	154	219
Snoqualmie	142	177
Skykomish	137	161
Skagit	100	112
Baker	101	133
Nooksack	103	(136)
Olympic Peninsula	105	(141)

Precipitation

During the month of February, the National Weather Service and Natural Resources Conservation Service climate stations reported near average precipitation totals throughout Washington river basins except the Olympics with only 50% of average and the Upper Yakima and Central Puget basin with well above normal precipitation. The highest percent of average in the state was at Stampede Pass NOAA which reported 147% of average for a total of 13.4 inches. The average for this site is 8.95 inches for February. The wettest spot in the state was reported at Olallie Meadows SNOTEL with a February accumulation of 21.5 inches.

RIVER BASIN	FEBRUARY PERCENT OF AVERAGE	WATER YEAR PERCENT OF AVERAGE
Spokane	94	110
Colville-Pend Oreille	73	104
Okanogan-Methow	73	105
Wenatchee-Chelan	85	98
Upper Yakima	119	103
Lower Yakima	85	105
Walla Walla	92	108
Lower Snake	94	113
Cowlitz-Lewis	77	102
White-Green-Puyallup	94	98
Central Puget Sound	117	107
North Puget Sound	98	99
Olympic Peninsula	50	90

Reservoir

Seasonal reservoir levels in Washington vary greatly due to specific watershed management practices required in preparation for irrigation season, fisheries management, power generation, municipal demands and flood control. Reservoir storage in the Yakima Basin was 345,000-acre feet, 69% of average for the Upper Reaches and 120,000-acre feet or 87% of average for Rimrock and Bumping Lakes. Storage at the Okanogan reservoirs was 91% of average for March 1. The power generation reservoirs included the following: Coeur d'Alene Lake, 55,000 acre feet, 38% of average and 23% of capacity; Chelan Lake, 150,000-acre feet, 60% of average and 22% of capacity; and the Skagit River reservoirs at 87% of average and 6528% of capacity.

BASIN	PERCENT OF CAPACITY	CURRENT STORAGE AS PERCENT OF AVERAGE
Spokane	23	38
Colville-Pend Oreille	57	115
Okanogan-Methow	66	91
Wenatchee-Chelan	22	60
Upper Yakima	41	69
Lower Yakima	52	87
Lower Snake	65	101
North Puget Sound	52	87

For more information contact your local Natural Resources Conservation Service office.

Streamflow

Forecasts vary from 139% of average for the Rex River near Cedar Falls to 81% of average for Okanogan and Similkameen rivers. April-September forecasts for some Western Washington streams include the Cedar River near Cedar Falls, 130%; White River, 119%; and Skagit River, 104%. Some Eastern Washington streams include the Yakima River near Parker, 114%: Wenatchee River at Plain, 113%; and Spokane River near Post Falls, 110%. Volumetric forecasts are developed using current, historic and average snowpack, precipitation and streamflow data collected and coordinated by organizations cooperating with NRCS.

Statewide February streamflows were mostly below average due to seasonally cool temperatures and a lack of snow melt. The Methow River near Pateros had the highest reported flows with 97% of average. The Bumping River near Nile with 38% of average was the lowest in the state. Other streamflows were the following percentage of average as reported by the River Forecast Center: the Cowlitz at Castle Rock, 78%; the Spokane at Spokane, 40%; the Columbia below Rock Island Dam, 62%; and the Cle Elum near Roslyn, 43%.

BASIN	PERCENT OF AVERAGE (50 PERCENT CHANCE OF EXCEEDENCE)
Spokane	90-110
Colville-Pend Oreille	99-110
Okanogan-Methow	81-89
Wenatchee-Chelan	96-113
Upper Yakima	121-128
Lower Yakima	108-119
Walla Walla	110-114
Lower Snake	106-113
Cowlitz-Lewis	101-119
White-Green-Puyallup	119-125
Central Puget Sound	117-139
North Puget Sound	104-110
Olympic Peninsula	115

STREAM	PERCENT OF AVERAGE FEBRUARY STREAMFLOWS
Pend Oreille Below Box Canyon	59
Kettle at Laurier	58
Columbia at Birchbank	76
Spokane at Long Lake	45
Similkameen at Nighthawk	78
Okanogan at Tonasket	65
Methow at Pateros	97
Chelan at Chelan	61
Wenatchee at Pashastin	46
Yakima at Cle Elum	45
Yakima at Parker	46
Naches at Naches	44
Grande Ronde at Troy	49
Snake below Lower Granite Dam	54
SF Walla Walla near Milton Freewater	89
Columbia River at The Dalles	60
Lewis at Ariel	57
Cowlitz below Mayfield Dam	71
Skagit at Concrete	65
Dungeness near Sequim	41

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BASIN SUMMARY OF SNOW COURSE DATA

MARCH 2008

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
ABERDEEN LAKE CAN.	4000	2/29/08	15	3.8	5.4	5.7
AHTANUM R.S.	3100	2/28/08	16	5.8	5.1	7.0
ALPINE MEADOWS	3500	2/27/08	139	68.0	39.4	33.8
ALPINE MEADOWS SNTL	3500	3/01/08	---	68.0	51.7	36.5
AMBROSE	6480	2/28/08	43	11.9	9.4	10.5
ASHLEY DIVIDE	4820	3/04/08	30	8.3	4.9	6.2
BADGER PASS SNOTEL	6900	3/01/08	89	32.5	26.8	29.7
BAIRD #2	3220	2/26/08	31	9.2	7.9	--
BAREE MIDWAY	4600	2/29/08	102	38.3	24.6	28.7
BAREE TRAIL	3800	2/29/08	47	18.3	11.8	8.2
BARKER LAKES SNOTEL	8250	3/01/08	46	10.9	12.2	11.1
BARNES CREEK CAN.	5320	3/02/08	54	16.3	17.2	17.3
BASIN CREEK SNOTEL	7180	3/01/08	25	5.2	6.3	6.1
BASSOO PEAK	5150	2/29/08	41	13.4	9.0	9.0
BEAVER CREEK TRAIL	2200	2/29/08	68	27.6	17.1	13.0
BEAVER PASS	3680	2/29/08	85	32.9	34.7	24.9
BEAVER PASS SNOTEL	3630	3/01/08	104	38.9	44.6	33.9
BIG WHITE MTN CAN.	5510	2/28/08	47	13.7	16.5	16.8
BLACK MOUNTAIN	7750	2/28/08	38	10.3	13.6	11.4
BLACK PINE SNOTEL	7100	3/01/08	38	10.9	8.6	10.1
BLACKWALL PILL CAN.	6370	3/01/08	---	29.0	34.2	30.0
BLEWETT PASS#2SNOTEL	4270	3/01/08	40	20.3	30.0	15.7
BLUE LAKE	5900	3/01/08	---	21.2E	18.5	21.1
BRENDA MINE CAN.	4450	3/01/08	---	11.3	15.3	11.3
BROOKMERE CAN.	3000	2/29/08	22	6.3	10.5	7.6
BROWN TOP AM	6000	2/28/08	141	55.6	--	53.4
BROWNS PASS		2/26/08	19	5.0	6.6	--
BRUSH CREEK TIMBER	5000	2/28/08	32	10.7	6.9	7.5
BULL MOUNTAIN	6600	2/25/08	25	4.7	3.9	5.1
BUMPING LAKE (NEW)	3400	2/28/08	62	23.3	20.6	16.9
BUMPING RIDGE SNOTEL	4600	3/01/08	87	31.2	30.2	24.9
BUNCHGRASS MDWSNOTEL	5000	3/01/08	73	23.1	20.7	24.4
BURNT MOUNTAIN PIL	4200	3/01/08	71	33.0	18.1	13.4
BUTTERMILK BUTTE	5250	2/28/08	41	12.4	15.2	--
CARMI CAN.	4100	3/02/08	14	3.5	5.8	5.8
CAYUSE PASS SNOTEL	5240	3/01/08	147	57.4	56.9	--
CHAMOKANE 2	3520	2/26/08	28	9.4	--	--
CHESSMAN RESERVOIR	6200	2/27/08	14	3.6	3.6	3.1
CHEWALAH #2	4930	2/29/08	60	21.5	17.1	--
CHICKEN CREEK	4060	2/28/08	61	19.5	14.0	14.4
CHIWAUKUM G.S.	2500	2/28/08	35	11.2	13.5	10.8
CITY CABIN	2390	2/26/08	55	21.0	8.0	10.2
CLOUDY PASS AM	6500	2/28/08	92	31.3	38.5	39.4
COLD CREEK STRIP	6020	2/26/08	30	7.6	9.2	--
COMBINATION SNOTEL	5600	3/01/08	24	6.0	4.5	4.5
COPPER BOTTOM SNOTEL	5200	3/01/08	29	9.0	6.9	9.9
COPPER CAMP	6950	2/23/08	81	27.0	--	--
COPPER CREEK	5700	2/23/08	36	10.7	7.0	12.5
COPPER MOUNTAIN	7700	2/24/08	31	7.5	6.6	8.9
CORNER CREEK	3150	2/27/08	50	16.0	9.0	6.7
CORRAL PASS SNOTEL	6000	3/01/08	93	32.4	30.6	29.5
COTTONWOOD CREEK	6400	2/28/08	22	4.9	6.4	6.0
COUGAR MTN. SNOTEL	3200	3/01/08	72	34.4	17.0	17.1
COX VALLEY	4500	2/29/08	116	43.6	43.0	31.7
COYOTE HILL	4200	2/27/08	30	10.0	6.0	9.1
DALY CREEK SNOTEL	5780	3/01/08	44	11.6	9.2	9.4
DEER PARK	5200	2/26/08	62	25.1	24.9	15.1
DESERT MOUNTAIN	5600	2/20/08	50	13.9	10.0	12.6
DEVILS PARK	5900	2/28/08	101	38.7	--	37.9
DISAUTEL PASS		2/26/08	23	7.0	6.6	--
DISCOVERY BASIN	7050	2/27/08	34	7.2	9.3	8.4
DIX HILL	6400	2/24/08	35	10.2	8.2	10.0
DOCK BUTTE AM	3800	3/05/08	173	74.4	--	52.6
DOMMERIE PLATS	2200	2/29/08	31	12.6	10.1	7.2
DUNCAN RIDGE	5370	2/26/08	26	6.8	6.6	--
DUNGENESS SNOTEL	4100	3/01/08	37	13.2	10.0	8.9
EAST FORK R.S.	5400	2/27/08	24	5.9	4.8	5.6
EASY PASS AM	5200	3/05/08	151	68.0	84.5	65.1
EL DORADO MINE	7800	2/24/08	32	8.8	9.7	15.8
ELBOW LAKE SNOTEL	3200	3/01/08	112	51.6	45.2	34.3
EMERY CREEK SNOTEL	4350	3/01/08	47	14.9	13.0	13.3
ENDERBY CAN.	5800	2/28/08	98	32.2	35.4	33.8
ESPERON CK. UP CAN.	5050	3/01/08	39	11.2	13.2	14.6
FATTY CREEK	5500	2/29/08	59	18.6	17.5	20.4
FISH CREEK	8000	2/27/08	31	7.6	8.1	7.8
FISH LAKE	3370	2/28/08	91	38.8	32.0	29.9
FISH LAKE SNOTEL	3370	3/01/08	87	35.2	30.8	30.6
FLATTOP MTN SNOTEL	6300	3/01/08	127	42.6	35.9	39.2
FLEECER RIDGE	7500	2/25/08	38	9.2	6.3	9.2
FOURTH OF JULY SUM	3200	2/26/08	59	16.0	11.6	8.2
FREEZEOUT CK. TRAIL	3500	3/02/08	44	12.3	11.8	11.3
FROHNER MDWS SNOTEL	6480	3/01/08	24	6.1	6.5	6.3
FROST MEADOWS	4630	2/27/08	57	19.8	20.3	--
GOAT CREEK	3600	2/26/08	25	7.4	6.9	6.1
GOLD MTN LOOKOUT		2/25/08	40	11.7	10.9	--
GRASS MOUNTAIN #2	2900	2/26/08	47	21.0	--	9.8
GRAVE CRK SNOTEL	4300	3/01/08	49	16.5	13.6	14.5
GRAYSTOKE LAKE CAN.	5500	3/01/08	37	9.1	--	13.3
GREEN LAKE SNOTEL	6000	3/01/08	75	25.1	23.5	19.7
GREYBACK RES CAN.	4700	3/01/08	56	18.2	6.7	7.8
GRIFFIN CR DIVIDE	5150	2/25/08	41	11.7	8.3	9.5
GROUSE CAMP SNOTEL	5380	3/01/08	60	18.6	22.3	17.6
HAMILTON HILL CAN.	4550	2/26/08	32	9.7	13.7	12.7
HAND CREEK SNOTEL	5030	3/01/08	38	11.4	9.9	9.9
HARTS PASS SNOTEL	6500	3/01/08	98	35.5	43.7	39.7
HARTS PASS	6500	2/28/08	103	40.2	--	36.8
HELL ROARING DIVIDE	5770	2/26/08	87	30.4	24.3	25.8
HERRIG JUNCTION	4850	2/28/08	75	25.6	21.0	22.2
HIGH RIDGE SNOTEL	4920	3/01/08	85	30.4	21.2	21.2
HOLBROOK	4530	3/01/08	30	9.1	8.6	8.3
HOODOO BASIN SNOTEL	6050	3/01/08	132	43.0	31.7	38.6
HUCKLEBERRY SNOTEL	2000	3/01/08	25	4.9	2.0	1.8
HUMBOLDT GLCH SNOTEL	4250	3/01/08	---	20.6	10.2	11.7
INTERGAARD	6450	2/23/08	20	4.2	5.3	6.2
IRENE'S CAMP	5530	2/26/08	37	9.3	9.1	--
ISINTOK LAKE CAN.	5100	2/29/08	18	3.5	5.9	6.5
JASPER PASS AM	5400	3/05/08	182	81.9	--	74.0
JUNE LAKE SNOTEL	3200	3/01/08	---	70.0	45.0	33.9
KELLER RIDGE	3700	2/28/08	24	6.3	7.0	--
KELLOGG PEAK	5560	2/26/08	100	36.0	26.8	25.8
KISHENEHN	3890	2/27/08	34	10.2	10.1	7.3
KIT CARSON PASTURE	4950	2/25/08	28	7.7	6.3	8.2
KLESILKWA CAN.	3450	2/25/08	38	13.5	--	10.5
KRAPT CREEK SNOTEL	4750	3/01/08	34	12.2	8.6	13.6
LAMB BUTTE		3/01/08	45	14.3	18.5	--
LESTER CREEK	3100	2/26/08	77	28.0	--	17.2
LIGHTNING LAKE CAN.	3700	2/24/08	39	12.4	14.0	10.3
LOGAN CREEK	4300	2/28/08	41	14.1	6.2	6.2
LOLO PASS SNOTEL	5240	3/01/08	95	31.6	22.5	26.8
LONE PINE SNOTEL	3800	3/01/08	122	54.1	39.2	31.7
LOOKOUT SNOTEL	5140	3/01/08	89	31.0	25.3	27.2
LOST HORSE MTN CAN.	6300	3/02/08	24	5.3	8.1	8.0
LOST HORSE SNOTEL	5000	3/01/08	51	17.9	17.1	18.3
LOST LAKE SNOTEL	6110	3/01/08	---	50.7	42.3	50.7
LOUP LOUP CAMPGROUND		2/27/08	26	7.3	12.2	--
LOWER SANDS CREEK #2	3120	2/28/08	80	29.8	17.0	16.6
LUBRECHT FOREST NO 3	5450	2/29/08	20	6.0	3.3	5.6
LUBRECHT FOREST NO 4	4650	2/29/08	11	2.4	1.3	2.7
LUBRECHT FOREST NO 6	4040	2/29/08	13	2.9	1.9	3.2
LUBRECHT HYDROPLOT	4200	2/29/08	19	5.1	4.2	5.1
LUBRECHT SNOTEL	4680	3/01/08	17	5.2	4.8	5.3
LYMAN LAKE SNOTEL	5900	3/01/08	135	47.3	58.2	55.1
LYNN LAKE	4000	2/26/08	101	40.3	--	16.1
MARIAS PASS	5250	2/27/08	56	17.9	14.2	14.9
MARTEN LAKE AM	3600	3/05/08	188	84.6	--	61.9
MARTEN RIDGE SNOTEL	3520	3/01/08	134	65.1	73.6	--
MAZAMA		2/27/08	37	11.2	11.2	--
MCCULLOCH CAN.	4200	2/29/08	18	4.5	6.2	6.2
MEADOWS CABIN	1900	3/01/08	37	13.5	3.7	5.5
MEADOWS PASS SNOTEL	3240	2/29/08	---	50.6e	33.0	19.8
METEOR		2/25/08	27	8.1	6.6	--
MICA CREEK SNOTEL	4510	3/01/08	81	29.5	23.4	23.2
MINERAL CREEK	4000	2/28/08	56	19.4	13.6	15.8
MINERS RIDGE SNOTEL	6200	3/01/08	128	43.6	49.9	45.2
MISSEZULA MTN CAN.	5080	2/24/08	23	5.7	9.4	8.4
MISSION CREEK CAN.	5840	3/01/08	---	13.7	15.2	17.1
MISSION RIDGE	5000	2/28/08	50	16.3	18.7	15.2
MONASHEE PASS CAN.	4500	3/02/08	35	10.2	11.5	11.8
MORRISSEY RIDGE CAN.	6100	3/01/08	---	23.8	20.1	24.1
MORSE LAKE SNOTEL	5400	3/01/08	130	50.8	49.1	47.0
MOSES MOUNTAIN (2)	4800	2/26/08	39	13.2	16.6	17.5
MOSES MTN SNOTEL	4800	3/01/08	36	10.1	14.7	13.4
MOSES PEAK	6650	2/26/08	53	18.6	--	11.7
MOSQUITO RDG SNOTEL	5200	3/01/08	---	33.8	29.9	31.1
MOULTON RESERVOIR	6850	2/27/08	31	6.4	5.2	6.2
MOUNT BLUM AM	5800	3/05/08	132	56.8	--	54.1
MOUNT CRAG SNOTEL	4050	3/01/08	87	31.3	29.3	26.8
MT. KOBAU CAN.	5500	3/01/08	28	7.7	12.1	10.2
MOUNT TOLMAN	2000	2/27/08	18	4.6	2.5	3.3
MOWICH SNOTEL	3150	3/01/08	15	5.8	1.3	1.5
MOUNT GARDNER	3300	2/26/08	68	30.0	17.8	13.0
MOUNT GARDNER SNOTEL	2860	3/01/08	75	30.7	19.4	14.1
MUTTON CREEK #1	5700	2/29/08	41	12.8	16.0	12.0
N.F. ELK CR SNOTEL	6250	3/01/08	35	8.9	9.0	10.2
NEVADA RIDGE SNOTEL	7020	3/01/08	46	13.3	9.9	13.2
NEW HOZOMEEN LAKE	2800	3/02/08	41	14.7	10.2	10.3
NEZ PERCE CMP SNOTEL	5650	3/01/08	46	13.7	10.3	12.7
NEZ PERCE PASS	6570	2/25/08	51	15.1	10.2	15.7
NOISY BASIN SNOTEL	6040	3/01/08	96	30.8	29.6	33.8
NORTH FORK JOCKO	6330	2/29/08	97	35.6	30.2	36.5
OLALLIE MDWS SNOTEL	3960	3/01/08	141	68.0	57.1	48.9
OPHIR PARK	7150	2/24/08	37	10.3	9.4	14.1
OYAMA LAKE CAN.	4100	2/29/08	19	4.6	6.1	6.2
PARADISE PARK SNOTEL	5500	3/01/08	172	77.4	64.1	59.7
PARK CK RIDGE SNOTEL	4600	3/01/08	116	49.0	52.4	44.1
PETERSON MDW SNOTEL	7200	3/01/08	31	7.0	8.2	7.8

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
PIGTAIL PEAK SNOTEL	5900	3/01/08	143	53.6	49.9	44.6
PIKE CREEK SNOTEL	5930	3/01/08	75	24.5	19.6	22.8
PIPESTONE PASS	7200	2/25/08	15	3.1	3.2	4.1
POPE RIDGE SNOTEL	3540	3/01/08	60	18.2	19.7	18.5
POSTILL LAKE CAN.	4200	2/29/08	18	4.8	8.1	7.3
POTATO HILL SNOTEL	4500	3/01/08	103	37.6	30.4	23.6
QUARTZ PEAK SNOTEL	4700	3/01/08	74	26.0	20.4	19.5
RAGGED MOUNTAIN	4200	3/02/08	76	29.4	21.6	17.5
RAGGED MTN SNOTEL	4210	3/01/08	80	29.5	22.9	--
RAGGED RIDGE	3330	2/27/08	54	17.2	8.6	7.8
RAINY PASS SNOTEL	4780	3/01/08	95	31.9	35.8	38.2
RAINY PASS	4780	2/29/08	97	37.1	35.8	33.8
REX RIVER SNOTEL	1900	3/01/08	119	62.2	43.1	23.9
ROCKER PEAK SNOTEL	8000	3/01/08	45	9.7	10.3	11.2
ROCKY CREEK AM	2100	3/05/08	111	50.0	36.0	26.5
ROLAND SUMMIT	5120	3/03/08	108	41.5	30.8	29.2
ROUND TOP MTN	4020	2/27/08	62	20.4	14.0	--
RUSTY CREEK	4000	2/29/08	22	5.8	7.0	6.2
SF THUNDER CK AM	2200	3/05/08	63	28.4	--	8.0
SADDLE MTN SNOTEL	7900	3/01/08	81	25.1	17.1	21.8
SAGE CREEK SADDLE	4080	2/27/08	77	27.6	17.7	15.5
SALMON MDWS SNOTEL	4500	3/01/08	31	8.6	10.9	10.1
SASSE RIDGE SNOTEL	4200	3/01/08	90	36.3	39.7	30.3
SATUS PASS	4030	2/28/08	64	22.6	13.4	9.6
SAVAGE PASS SNOTEL	6170	3/01/08	88	27.4	19.5	22.5
SAWMILL RIDGE	4700	2/26/08	89	32.7	--	28.6
SAWMILL RIDGE SNOTEL	4630	3/01/08	109	49.6	50.2	--
SCHREIBERS MDW AM	3400	3/04/08	153	61.8	59.6	43.5
SENTINEL BT SNOTEL	4920	3/01/08	28	6.3	10.3	--
SHEEP CANYON SNOTEL	4050	3/01/08	127	59.0	39.3	31.6
SHERWIN SNOTEL	3200	3/01/08	---	15.2	10.4	10.8
SILVER STAR MTN CAN.	5600	3/01/08	70	25.6	26.2	25.0
SKALKAHO SNOTEL	7260	3/01/08	71	22.5	17.6	20.2
SKITWISH RIDGE	5110	2/26/08	112	40.2	26.7	27.2
SKOOKUM CREEK SNOTEL	3920	3/01/08	107	57.6	32.7	18.9
SKOOKUM LAKES	4230	3/03/08	53	19.4	9.9	--
SLIDE ROCK MOUNTAIN	7100	2/23/08	40	11.7	9.4	12.6
SOURDOUGH GUL SNOTEL	4000	3/01/08	30	12.8	.4	--
SOUTH BALDY	4920	3/03/08	70	24.9	--	--
SPENCER MDW SNOTEL	3400	3/01/08	116	51.4	38.1	28.6
SPIRIT LAKE SNOTEL	3100	3/01/08	26	16.4	7.1	6.2
SPOTTED BEAR MTN.	7000	2/21/08	44	13.8	9.0	12.7
SPRUCE SPGS SNOTEL	5700	3/01/08	63	23.3	12.6	--
STARVATION MOUNTAIN	6750	2/27/08	48	15.6	19.9	16.6
STAHL PEAK SNOTEL	6030	3/01/08	100	33.8	27.5	29.9
STAMPEDE PASS SNOTEL	3860	3/01/08	118	53.2	41.4	39.8
STEMPLE PASS	6600	2/26/08	32	8.5	6.8	8.3
STEVENS PASS SNOTEL	4070	3/01/08	113	38.9	36.7	38.3
STORM LAKE	7780	2/27/08	41	10.3	10.0	10.2
STRYKER BASIN	6180	2/28/08	91	31.3	25.8	26.9
SUMMERLAND RES CAN.	4200	2/27/08	27	7.4	10.7	8.4
SUMMIT G.S. #2	4600	2/26/08	32	8.2	10.1	8.1
SUNSET SNOTEL	5540	3/01/08	---	22.9	16.0	26.0
SURPRISE LKS SNOTEL	4250	3/01/08	134	52.5	46.9	40.1
SWAMP CREEK SNOTEL	4000	3/01/08	50	20.0	21.0	17.2
TEN MILE LOWER	6600	2/26/08	26	5.6	6.0	5.9
TEN MILE MIDDLE	6800	2/26/08	32	7.5	7.5	8.9
THUNDER BASIN SNOTEL	4200	3/01/08	82	32.2	35.3	29.7
THOMPSON CREEK	2500	2/27/08	35	11.3	4.2	--
THOMPSON RIDGE	4650	2/28/08	37	11.7	13.5	--
TINKHAM CREEK SNOTEL	3000	3/01/08	100	41.3	31.9	26.7
TOATS COULEE	2850	2/26/08	15	3.8	4.2	3.4
TOGO	3370	2/27/08	39	12.6	10.7	8.6
TOUCHET SNOTEL	5530	3/01/08	90	36.4	26.2	28.5
TRINKUS LAKE	6100	3/01/08	---	34.6E	32.1	36.4
TROUGH #2 SNOTEL	5310	3/01/08	12	5.0	10.0	9.3
TROUT CREEK CAN.	5650	2/25/08	23	6.1	8.9	6.7
TRUMAN CREEK	4060	3/04/08	24	6.4	5.3	4.4
TUNNEL AVENUE	2450	2/29/08	70	29.7	22.8	18.6
TV MOUNTAIN	6800	2/29/08	51	17.0	14.4	15.0
TWELVEMILE SNOTEL	5600	3/01/08	59	21.1	13.7	16.0
TWIN CAMP	4100	2/26/08	72	25.7	--	21.5
TWIN CREEKS	3580	2/21/08	41	12.3	7.5	10.2
TWIN LAKES SNOTEL	6400	3/01/08	111	41.7	33.0	34.7
UPPER HOLLAND LAKE	6200	3/01/08	---	27.9E	23.2	30.0
UPPER WHEELER SNOTEL	4400	3/01/08	43	12.7	12.5	11.7
VASEUX CREEK CAN.	4250	2/28/08	13	2.8	5.3	5.5
VULCAN MTN	4660	2/28/08	31	9.9	12.0	--
VULCAN ROAD	3840	2/28/08	22	6.9	8.9	--
WARM SPRINGS SNOTEL	7800	3/01/08	61	16.9	18.1	17.0
WATSON LAKES AM	4500	3/05/08	162	72.9	--	48.6
WATERHOLE SNOTEL	5000	3/01/08	115	45.1	44.1	30.0
WEASEL DIVIDE	5450	2/28/08	81	28.4	27.2	28.7
WELLS CREEK SNOTEL	4200	3/01/08	90	33.9	37.8	28.4
WHITE PASS ES SNOTEL	4500	3/01/08	72	25.7	22.3	21.8
WHITE ROCKS MTN CAN.	7200	3/01/08	56	18.3	19.4	19.6

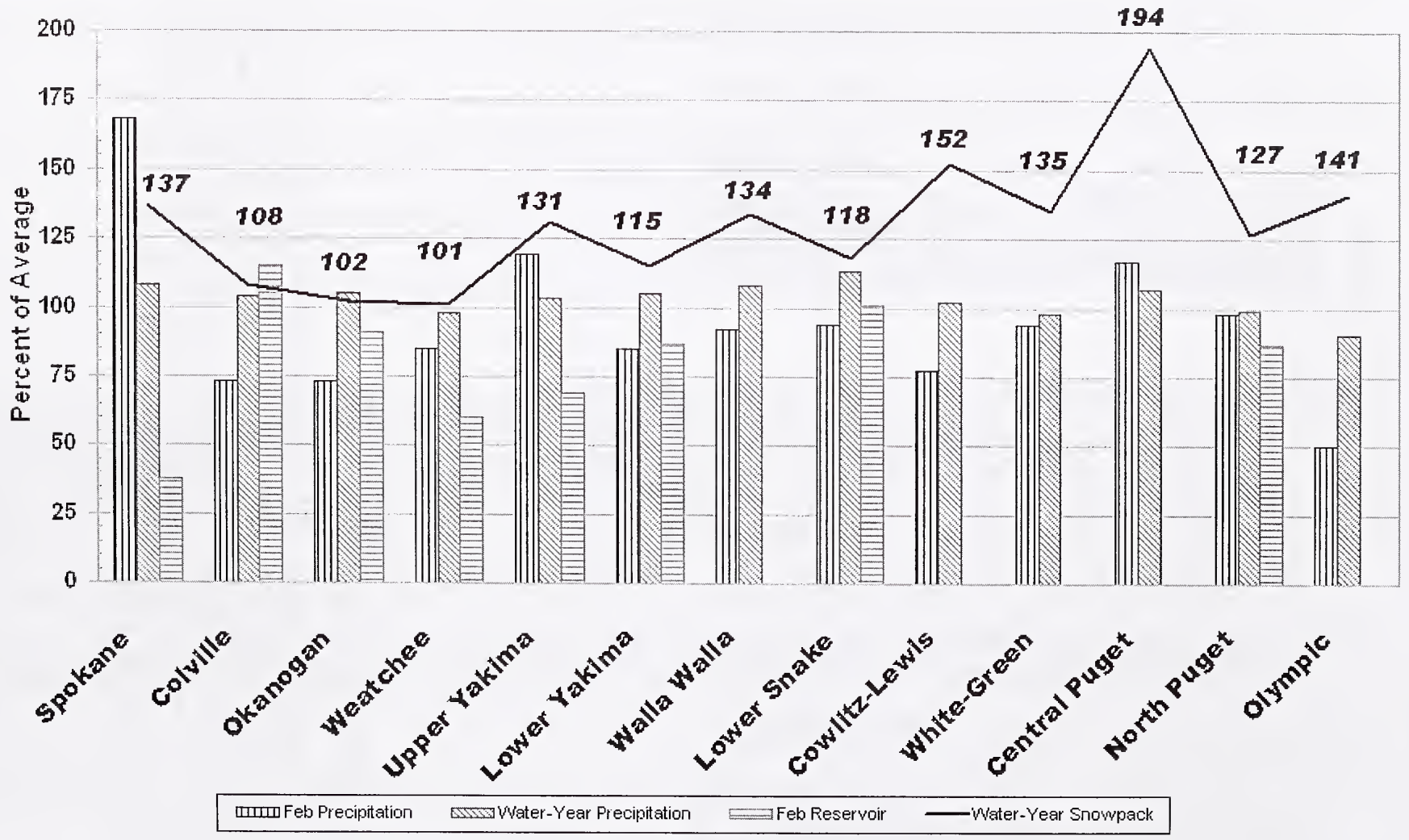
2008 Western Snow Conference

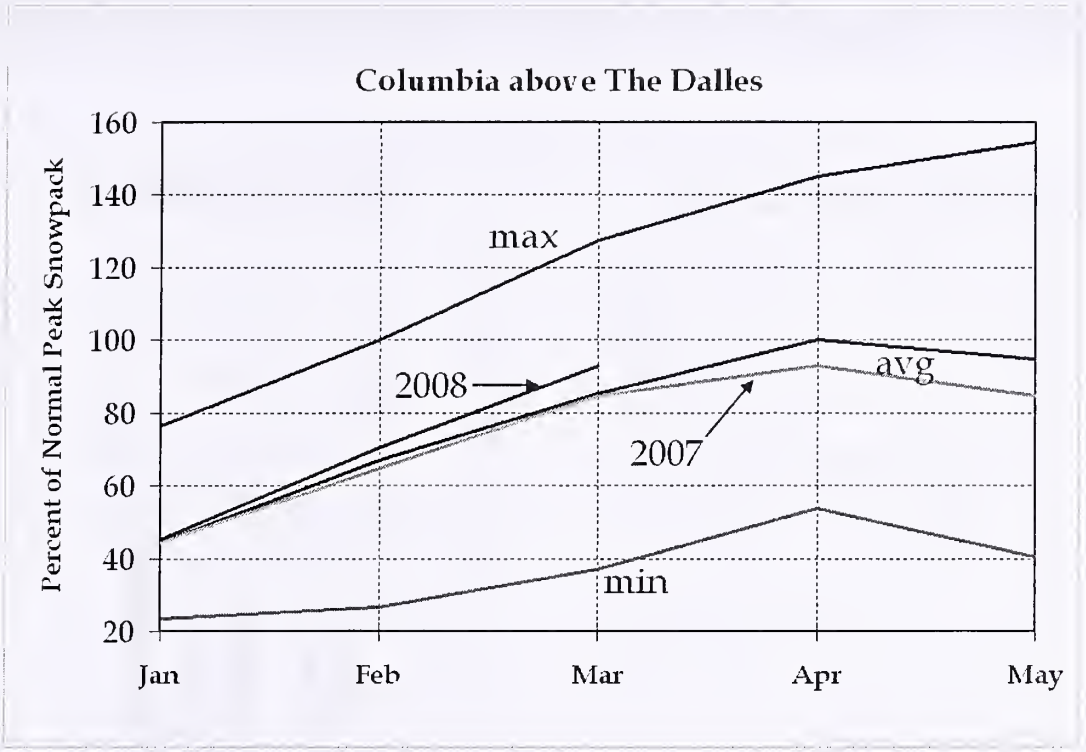
The 76th annual Western Snow Conference will be in Hood River, Oregon April 14-17. The theme of this year's conference is "Working Across Boundaries". A short course workshop titled "Understanding/Using Mountain Soil Moisture Data" will be held on Monday, April 14, and will provide a forum of continued education for the relationship between soil and water. The North Pacific Area of the Western Snow Conference is the host for this conference. The Conference Hotel is at the Best Western Hood River Inn, 541-386-2200 or 800-828-7873. Space is limited so sign-up early. Additional information on conference is available on the Western Snow Conference web page: http://www.westernsnowconference.org/

NRCS Natural Resources Conservation Service

March 1. 2008 - Snowpack. Precipitation and Reservoir Conditions at a Glance

(Water Year = October 1, 2007 - Current Date)





March 1, 2008

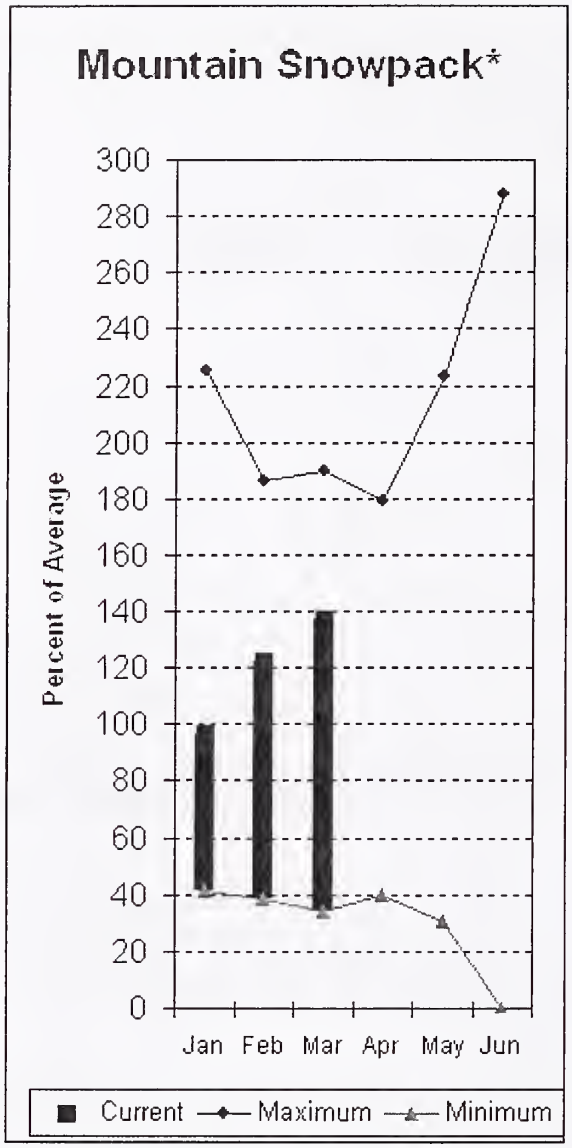
The Columbia Basin snowpack charts are produced, using only automated data. These data are telemetered via remote collection sites in Canada and the United States. The data are provisional, until they are officially released by the responsible data collection agency.

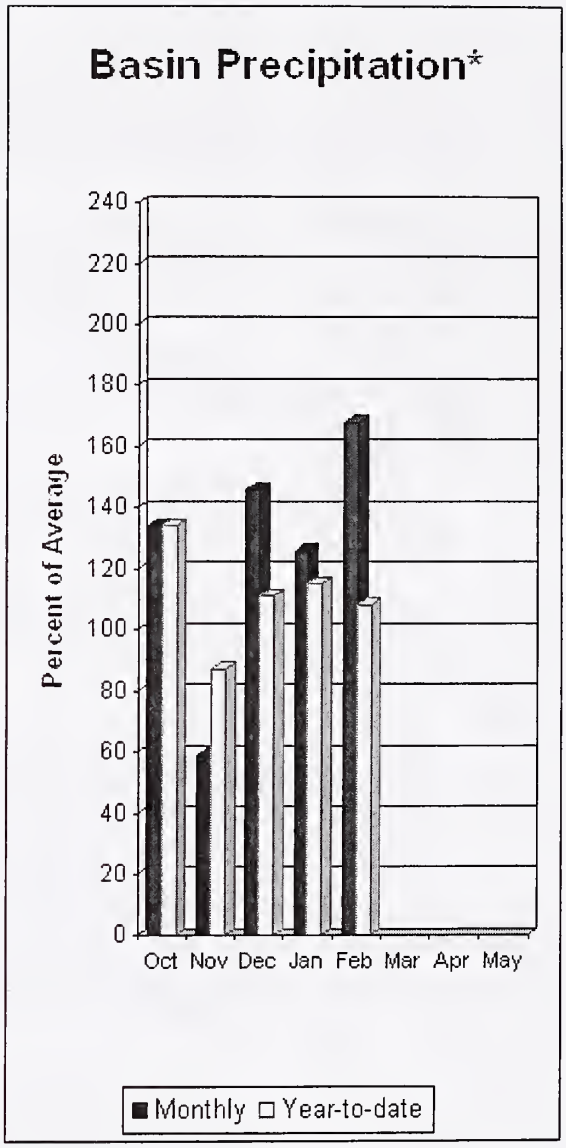
Overall, snow conditions in the Columbia Basin just keep getting better and better. The combined snowpack above The Dalles is currently at 109 percent of average, compared to 99 percent last year and 105 percent last month. The Canadian snow pack increased from 103 percent on February 1 to 110 percent on March 1, a welcome addition. In fact all northern Columbia snowpacks increased from last month. However, all southern Columbia snowpacks decreased slightly from last month.

The snowpack in the Columbia Basin above Castlegar is at 108 percent of average. This compares to 111 percent last year and 102 percent last month. For the basin above Grand Coulee, the snowpack is at 107 percent of average, compared to 105 percent last year and 103 percent last month. The Snake River snowpack above Ice Harbor is at 110 percent of average, compared to 82 percent last year and 112 percent last month. The Kettle snowpack is once again the lowest at 95 percent of average, while the snowpack in the Deschutes is still the highest at 143 percent.

Overall, the 2008 water supply potential within the Columbia Basin continues to look very good.

Spokane River Basin





*Based on selected stations

The March 1 forecasts for summer runoff within the Spokane River Basin are 110% of average near Post Falls and 109% at Long Lake. The Chamokane River near Long Lake forecasted to have 90% of average flows for the May-August period. The forecast is based on a basin snowpack that is 137% of average and precipitation that is 94% of average for the water year. Precipitation for February was above normal at 110% of average. Streamflow on the Spokane River at Long Lake was 45% of average for February. March 1 storage in Coeur d'Alene Lake was 55,000-acre feet, 38% of average and 23% of capacity. Snowpack at Quartz Peak SNOTEL site was 133% of average with 26 inches of water content. Average temperatures in the Spokane basin were 1 degree below normal for February and 1 degree below normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SPOKANE near Post Falls (2)	APR-JUL	2210	2560	2800	110	3040	3390	2550
	APR-SEP	2320	2670	2910	110	3150	3500	2650
SPOKANE at Long Lake (2)	APR-JUL	2450	2840	3100	109	3360	3750	2850
	APR-SEP	2650	3060	3340	109	3620	4030	3070
CHAMOKANE CREEK near Long Lake	MAY-AUG	3.6	6.9	9.2	90	11.5	14.8	10.2

SPOKANE RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SPOKANE RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

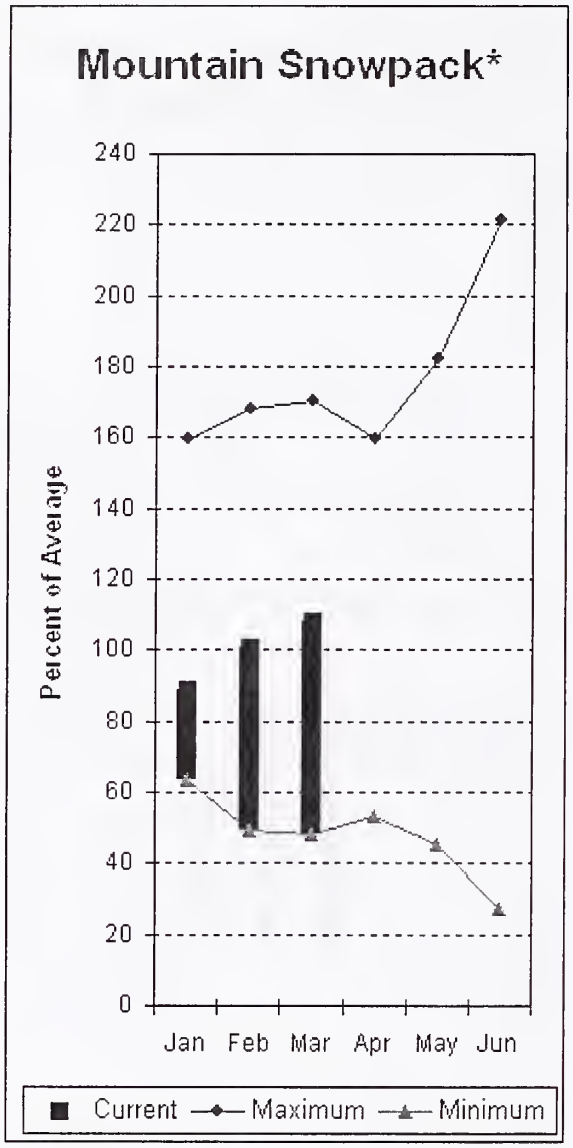
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SPOKANE RIVER	18	138	137
NEWMAN LAKE	2	159	158

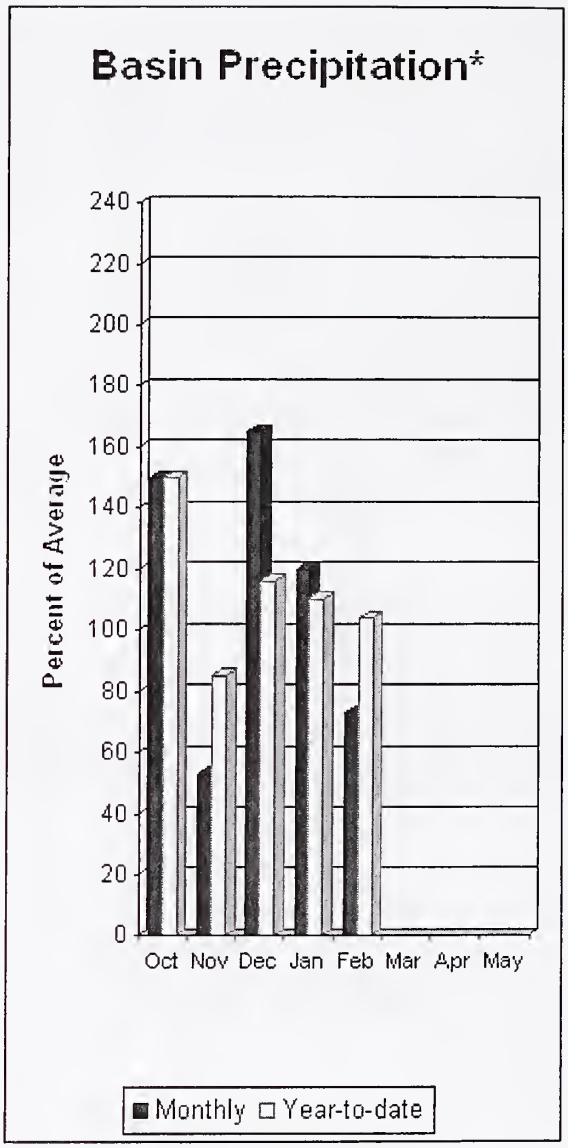
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level.

Colville - Pend Oreille River Basins





*Based on selected stations

The April – September average forecast for the Kettle River streamflow is 99%, Colville at Kettle Falls is 110% and Priest River near the town of Priest River is 106%. February streamflow was 59% of average on the Pend Oreille River, 76% on the Columbia at Birchbank and 76% on the Kettle River. March 1 snow cover was 108% of average in the Pend Oreille Basin River Basin and 86 % in the Kettle River Basin. Bunchgrass Meadows SNOTEL site had 23.1 inches of snow water on the snow pillow. Normally Bunchgrass would have 24.4 inches on March 1. Precipitation during February was 73% of average, bringing the year-to-date precipitation to 104% of average. Reservoir storage in the basin, including Lake Pend Oreille and Priest Lake was 115% of normal. Average temperatures were 1 degree below normal for February and 1 degree below normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
PEND OREILLE Lake Inflow (2)	APR-JUL	12300	12600	12800	101	13000	13300	12700
	APR-SEP	13400	13800	14000	101	14200	14600	13900
PRIEST near Priest River (1,2)	APR-JUL	640	800	870	107	940	1100	815
	APR-SEP	685	850	925	106	1000	1170	870
PEND OREILLE bl Box Canyon (2)	APR-JUL	11000	12300	13100	102	13900	15200	12900
	APR-SEP	11700	13200	14300	101	15400	16900	14100
COLVILLE at Kettle Falls	APR-JUL	82	117	141	110	165	200	128
	APR-SEP	87	127	155	110	183	225	141
KETTLE near Laurier	APR-JUL	1360	1660	1860	100	2060	2360	1870
	APR-SEP	1430	1740	1950	99	2160	2470	1970
COLUMBIA at Birchbank (1,2)	APR-JUL	31900	34100	35100	98	36100	38300	35700
	APR-SEP	40600	42800	43800	101	44800	47000	43500
COLUMBIA at Grand Coulee Dm (1,2)	APR-JUL	50800	53600	54900	102	56200	59000	53800
	APR-SEP	59900	63400	65000	102	66600	70100	64000

COLVILLE - PEND OREILLE RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

COLVILLE - PEND OREILLE RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

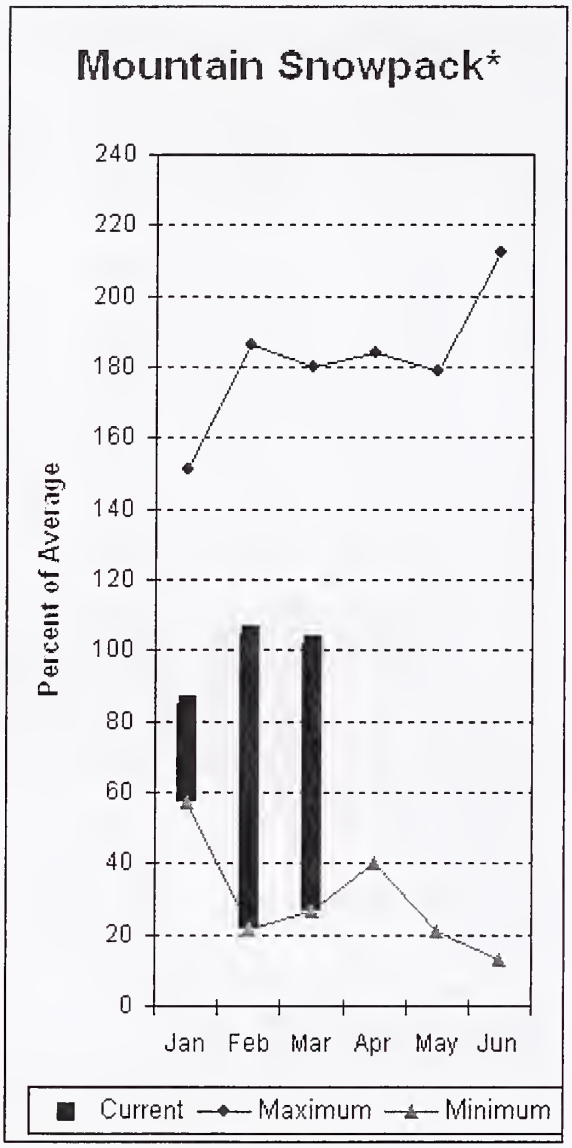
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
COLVILLE RIVER	0	123	0
PEND OREILLE RIVER	12	131	110
KETTLE RIVER	7	83	86

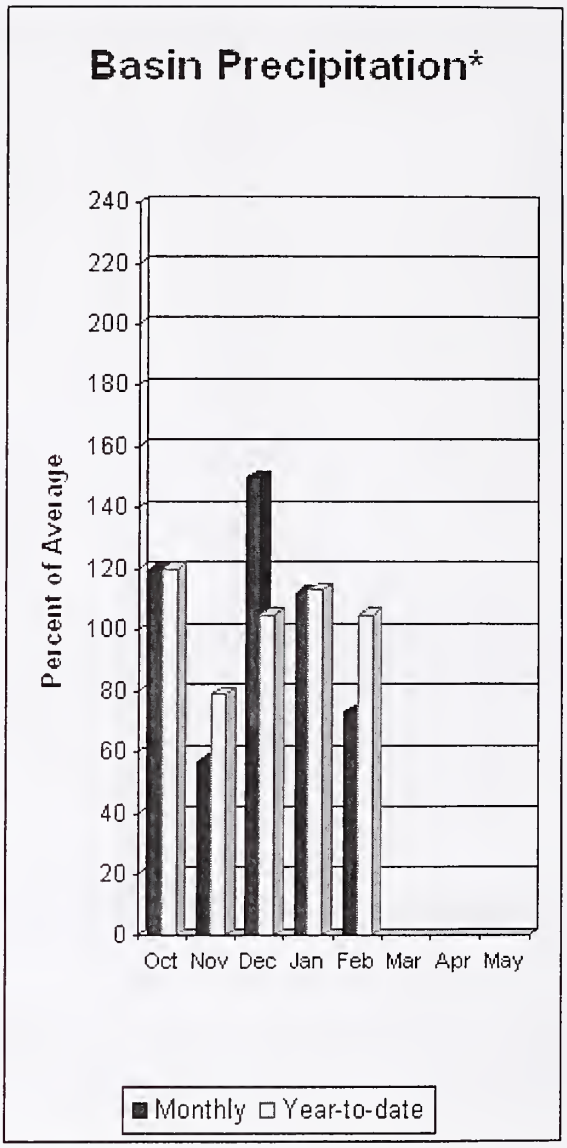
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level.

Okanogan - Methow River Basins





*Based on selected stations

Summer runoff average forecast for the Okanogan River is 81%, Similkameen River is 81% and Methow River is 89%. Salmon Creek should be expected to have slightly below normal flows this summer as well. March 1 snow cover on the Okanogan was 93% of average, Omak Creek was 98% and the Methow was 94%. February precipitation in the Okanogan-Methow was 73% of average, with precipitation for the water year at 105% of average. February streamflow for the Methow River was 97% of average, 65% for the Okanogan River and 78% for the Similkameen. Snow-water content at Salmon Meadows SNOTEL was 8.6inches. Average for this site is 10.1 inches on March 1. Combined storage in the Conconully Reservoirs was 16,000-acre feet, which is 66% of capacity and 91% of the March 1 average. Temperatures were near normal for February and 1-2 degrees below for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Similkameen R nr Nighthawk (1)	APR-JUL	745	985	1090	81	1200	1430	1350
	APR-SEP	830	1070	1180	81	1290	1530	1450
Okanogan R nr Tonasket (1)	APR-JUL	805	1130	1280	81	1430	1760	1580
	APR-SEP	905	1270	1430	81	1590	1960	1770
Okanogan R at Malott (1)	APR-JUL	825	1170	1320	81	1470	1810	1635
	APR-SEP	935	1310	1480	81	1650	2030	1826
Methow R nr Pateros	APR-SEP	715	810	875	89	940	1040	985
	APR-JUL	655	750	810	89	870	965	910

OKANOGAN - METHOW RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SALMON LAKE	10.5	7.8	9.5	8.4
CONCONULLY RESERVOIR	13.0	7.7	7.7	8.7

OKANOGAN - METHOW RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

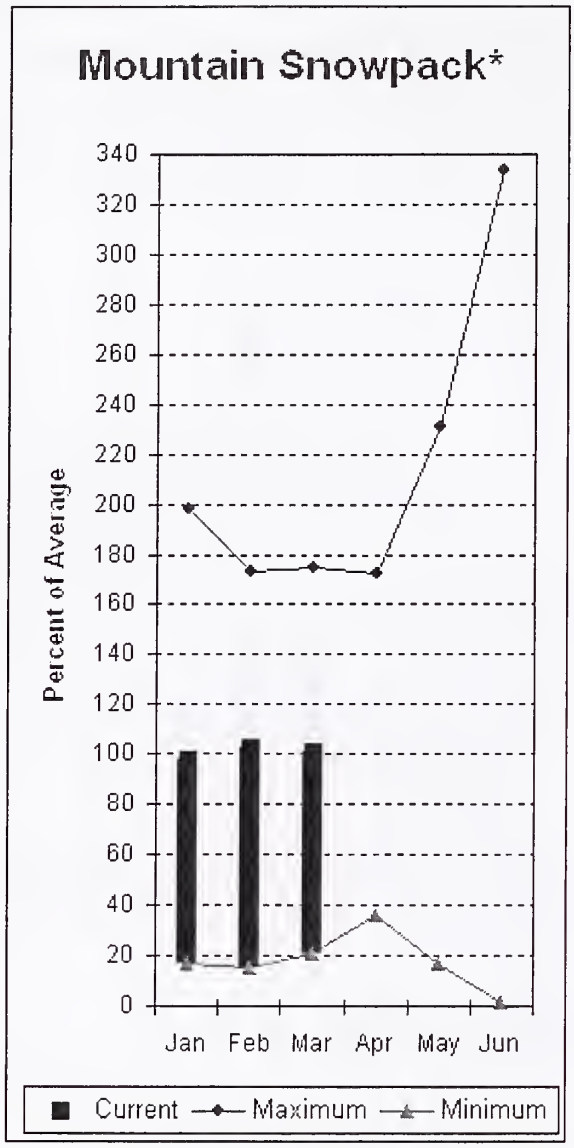
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
OKANOGAN RIVER	23	87	93
OMAK CREEK	3	79	98
SANPOIL RIVER	1	114	139
SIMILKAMEEN RIVER	5	74	84
TOATS COULEE CREEK	1	95	112
CONCONULLY LAKE	3	80	96
METHOW RIVER	8	85	97

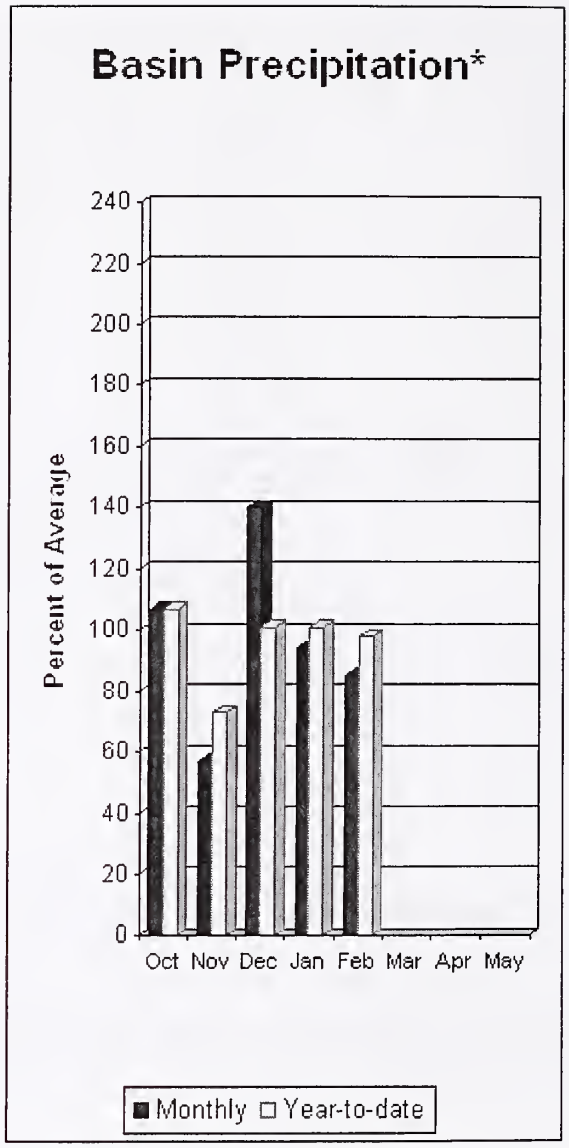
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Wenatchee - Chelan River Basins





*Based on selected stations

Precipitation during February was 85% of average in the basin and 98% for the year-to-date. Runoff for Entiat River is forecast to be 96% of average for the summer. The March-September average forecast for Chelan River is 97%, Wenatchee River at Plain is 113%, Stehekin River is 99% and Icicle Creek is 102%. Stemilt and Squilchuck creeks should have near average flows as well. February average streamflows on the Chelan River were 61% and on the Wenatchee River 46%. March 1 snowpack in the Wenatchee River Basin was 104% of average; the Chelan, 94%; the Entiat, 98% and Stemilt Creek, 108%. Reservoir storage in Lake Chelan was 150,000-acre feet, 60% of March 1 average and 22% of capacity. Park Creek Ridge SNOTEL had the most snow water with 49 inches of water. This site would normally have 44.1 inches on March 1. Temperatures were near normal for February and 1-2 degrees below for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Stehekin R at Stehekin	APR-JUL	575	645	695	99	745	815	700
	APR-SEP	700	775	825	99	875	950	830
Chelan R at Chelan (2)	APR-JUL	880	965	1020	97	1080	1160	1050
	APR-SEP	995	1090	1150	97	1210	1310	1190
Entiat R nr Ardenvoir	APR-JUL	172	192	205	95	220	240	215
	APR-SEP	197	215	230	96	245	265	240
Wenatchee R at Plain	APR-JUL	1040	1140	1210	113	1280	1380	1070
	APR-SEP	1150	1260	1330	113	1400	1510	1180
Icicle Ck nr Leavenworth	APR-JUL	275	300	315	102	330	355	310
	APR-SEP	300	325	345	102	365	390	340
Wenatchee R at Peshastin	APR-JUL	1380	1520	1610	109	1700	1840	1480
	APR-SEP	1530	1680	1780	109	1880	2030	1630
Columbia R bl Rock Island Dam (1,2)	APR-JUL	48200	56900	60800	103	64700	73400	59000
	APR-SEP	59500	67600	71300	103	75000	83200	69500

WENATCHEE - CHELAN RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CHELAN LAKE	676.1	150.3	343.1	250.1

WENATCHEE - CHELAN RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

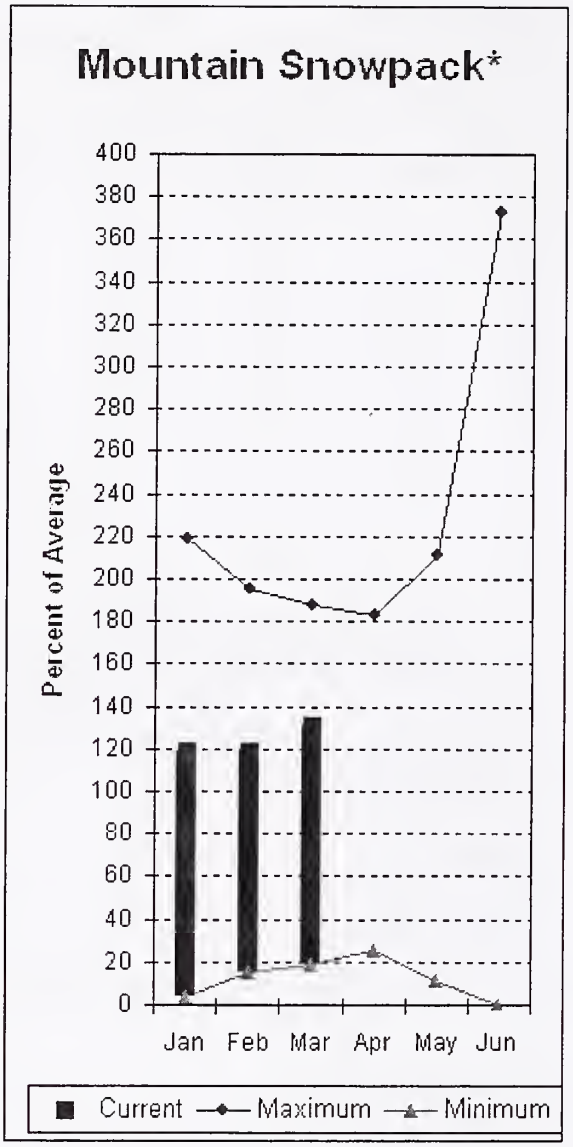
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CHELAN LAKE BASIN	7	99	94
ENTIAT RIVER	1	92	98
WENATCHEE RIVER	9	93	104
STEMILT CREEK	2	93	108
COLOCKUM CREEK	1	50	54

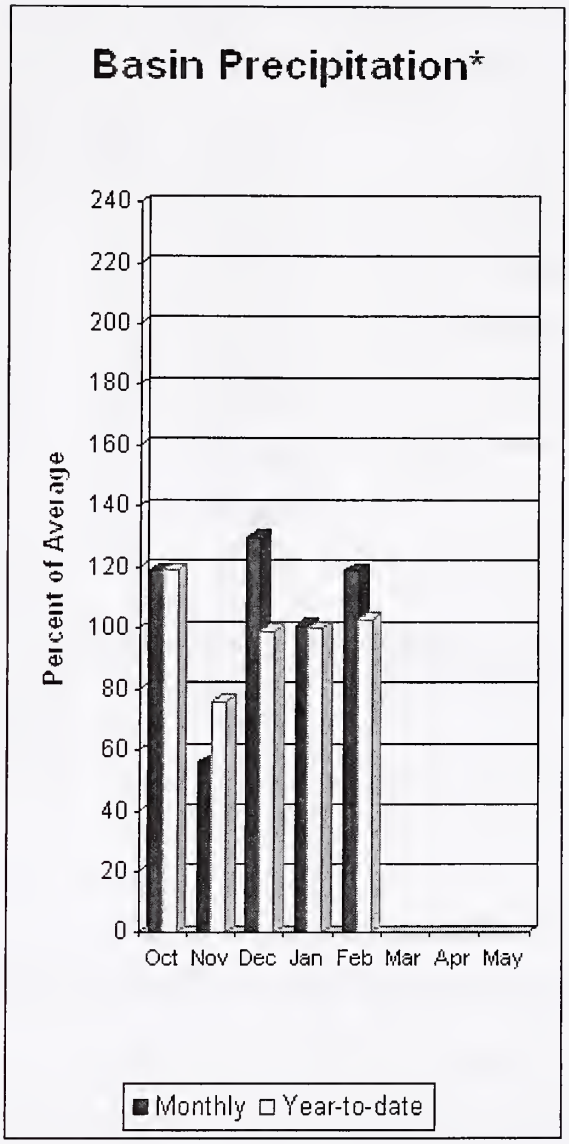
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Upper Yakima River Basin





*Based on selected stations

March 1 reservoir storage for the Upper Yakima reservoirs was 345,000-acre feet, 69% of average. Forecasts for the Yakima River at Cle Elum are 121% of average and the Teanaway River near Cle Elum is at 128%. Lake inflows are all forecasted to be above average this summer. February streamflows within the basin were Yakima near Cle Elum at 45% and Cle Elum River near Roslyn at 43%. March 1 snowpack was 131% based upon 9 snow course and SNOTEL readings within the Upper Yakima Basin. Precipitation was 119% of average for February and 103% year-to-date for water. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U.S. Bureau of Reclamation's forecast for the total water supply available, which includes irrigation return flow.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Keechelus Reservoir Inflow (2)	APR-JUL	122	139	151	125	163	180	121
	APR-SEP	137	155	167	126	179	197	133
Kachess Reservoir Inflow (2)	APR-JUL	115	129	139	125	149	163	111
	APR-SEP	126	140	150	125	160	174	120
Cle Elum Lake Inflow (2)	APR-JUL	440	475	500	122	525	560	410
	APR-SEP	485	525	550	122	575	615	450
Yakima R at Cle Elum (2)	APR-JUL	805	915	990	121	1060	1170	820
	APR-SEP	885	1010	1090	121	1170	1300	900
Teanaway R bl Forks nr Cle Elum	APR-JUL	152	170	183	128	196	215	143
	APR-SEP	156	174	187	128	200	220	146

UPPER YAKIMA RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
KEECHELUS	157.8	64.2	94.7	102.4
KACHESS	239.0	146.3	161.5	154.7
CLE ELUM	436.9	134.1	268.0	241.4

UPPER YAKIMA RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

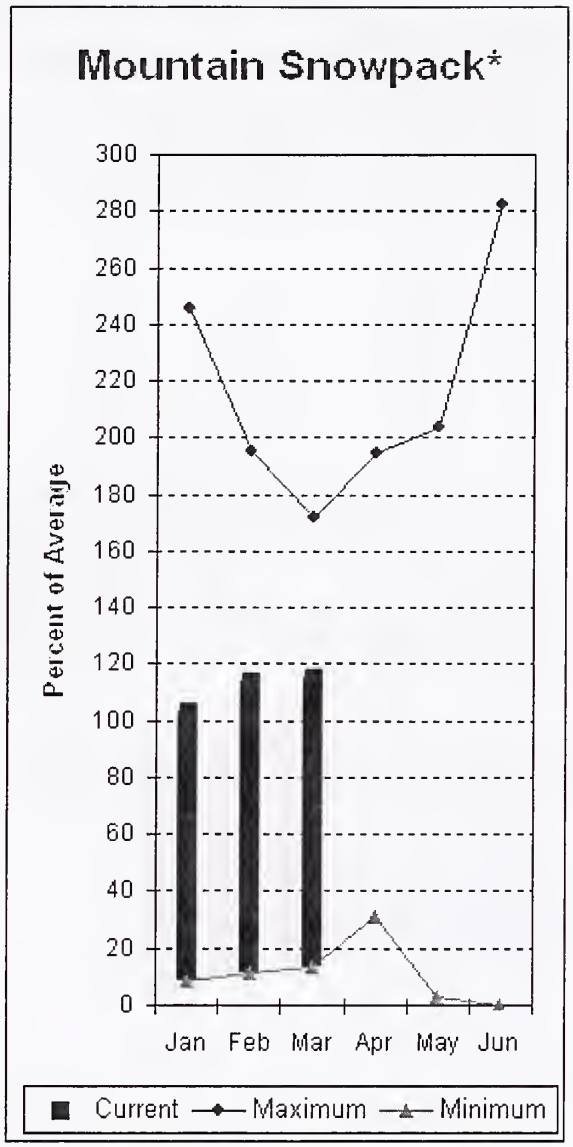
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER YAKIMA RIVER	9	108	131

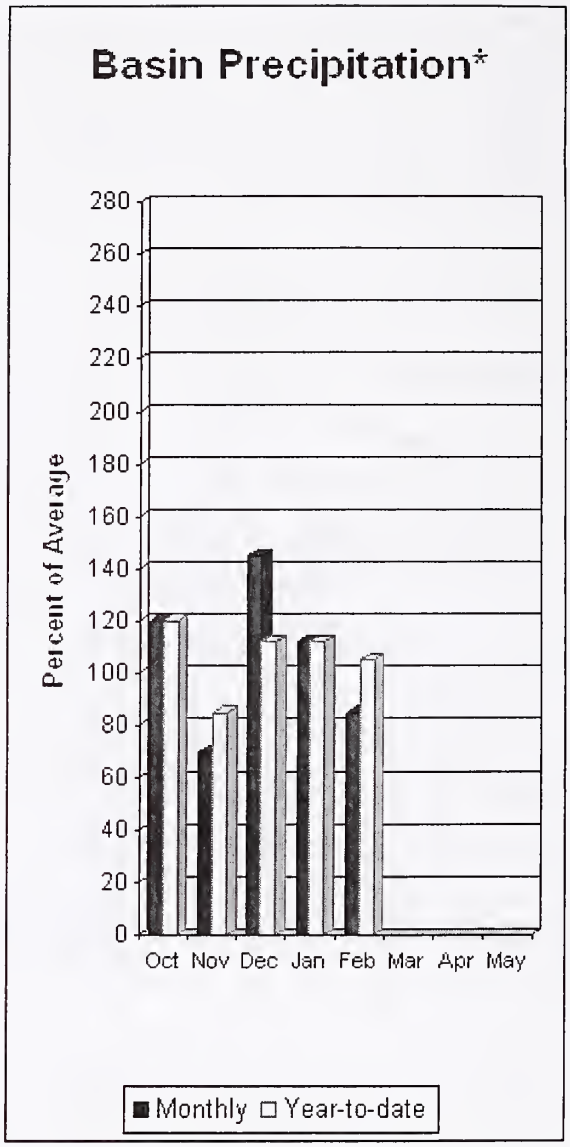
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Lower Yakima River Basin





*Based on selected stations

February average streamflows within the basin were: Yakima River near Parker, 46%; Naches River near Naches, 44%; and Yakima River at Kiona, 54%. March 1 reservoir storage for Bumping and Rimrock reservoirs was 120,000-acre feet, 87% of average. Forecast averages for Yakima River near Parker are 114%; American River near Nile, 109%; Ahtanum Creek, 113%; and Klickitat River near Glenwood, 119%. March 1 snowpack was 115% based upon 8 snow course and SNOTEL readings within the Lower Yakima Basin and Ahtanum Creek reported in at 108%of average. Precipitation was 85% of average for February and 105% year-to-date for water. Temperatures were 2-3 degrees above normal for February and 1-2 degrees below for the water year. Volume forecasts for Yakima Basin are for natural flow. As such, they March differ from the U.S. Bureau of Reclamation's forecast for the total water supply available, which includes irrigation return flow.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bumping Lake Inflow (2)	APR-JUL	114	128	137	112	146	160	122
	APR-SEP	124	138	148	112	158	172	132
American R nr Nile	APR-JUL	98	110	118	109	126	138	108
	APR-SEP	108	120	129	109	138	150	118
Rimrock Lake Inflow (2)	APR-JUL	192	210	220	107	230	250	205
	APR-SEP	230	245	260	108	275	290	240
Naches R nr Naches (2)	APR-JUL	705	785	840	117	895	975	720
	APR-SEP	765	850	910	117	970	1060	780
Ahtanum Ck at Union Gap	APR-JUL	24	30	34	113	38	44	30
	APR-SEP	26	32	36	113	40	46	32
Yakima R nr Parker (2)	APR-JUL	1700	1910	2050	114	2190	2400	1800
	APR-SEP	1890	2100	2250	114	2400	2610	1980
KLICKITAT near Glenwood	APR-JUL	131	142	150	119	158	169	126
	APR-SEP	173	185	194	119	205	215	163

LOWER YAKIMA RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BUMPING LAKE	33.7	7.4	14.8	11.5
RIMROCK	198.0	112.9	165.3	126.1

LOWER YAKIMA RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

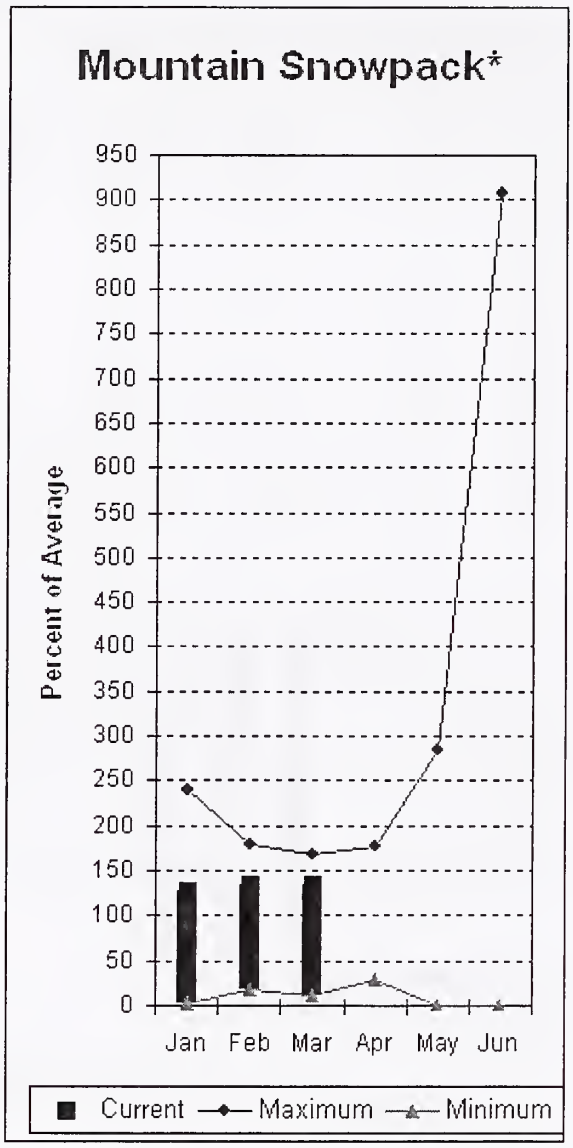
Watershed	Number of Data Sites	This Year as % of Last Yr	Average

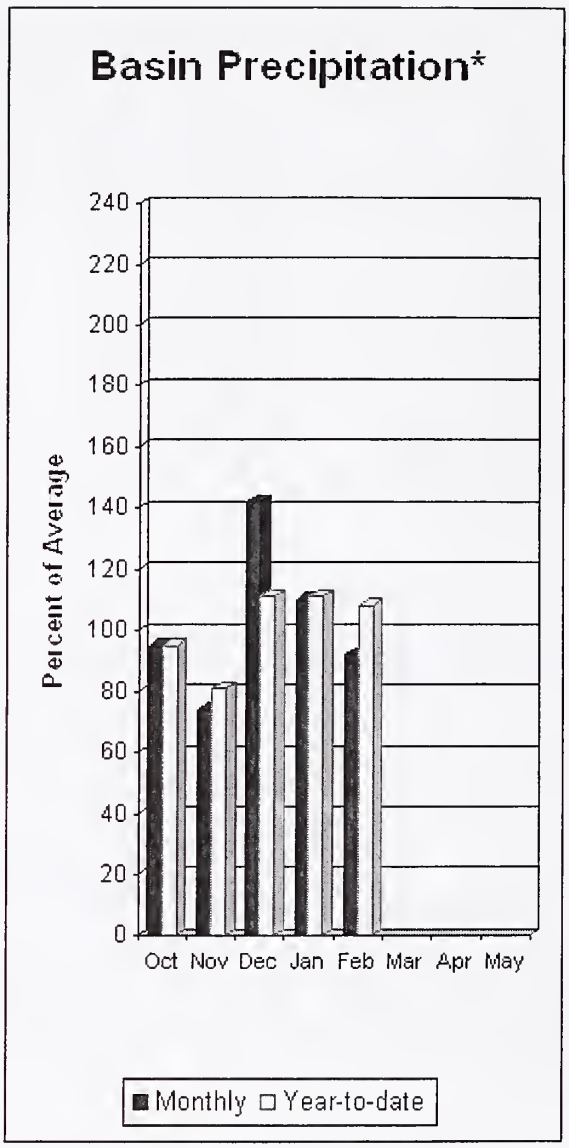
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Walla Walla River Basin





*Based on selected stations

February precipitation was 92% of average, maintaining the year-to-date precipitation at 108% of average. Snowpack in the basin was 134% of average. Streamflow forecasts are 114% of average for Mill Creek and 110% for the SF Walla Walla near Milton-Freewater. February streamflow was 89% of average for the Walla Walla River. Average temperatures were 2 degrees above normal for February and near average for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SF Walla Walla R nr Milton-Freewater	MAR-SEP	76	84	89	110	94	102	81
	APR-SEP	63	69	74	110	79	85	67
Mill Ck nr Walla Walla	APR-JUL	21	25	28	117	31	35	24
	APR-SEP	25	29	32	114	35	39	28

WALLA WALLA RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

WALLA WALLA RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WALLA WALLA RIVER	2	141	134

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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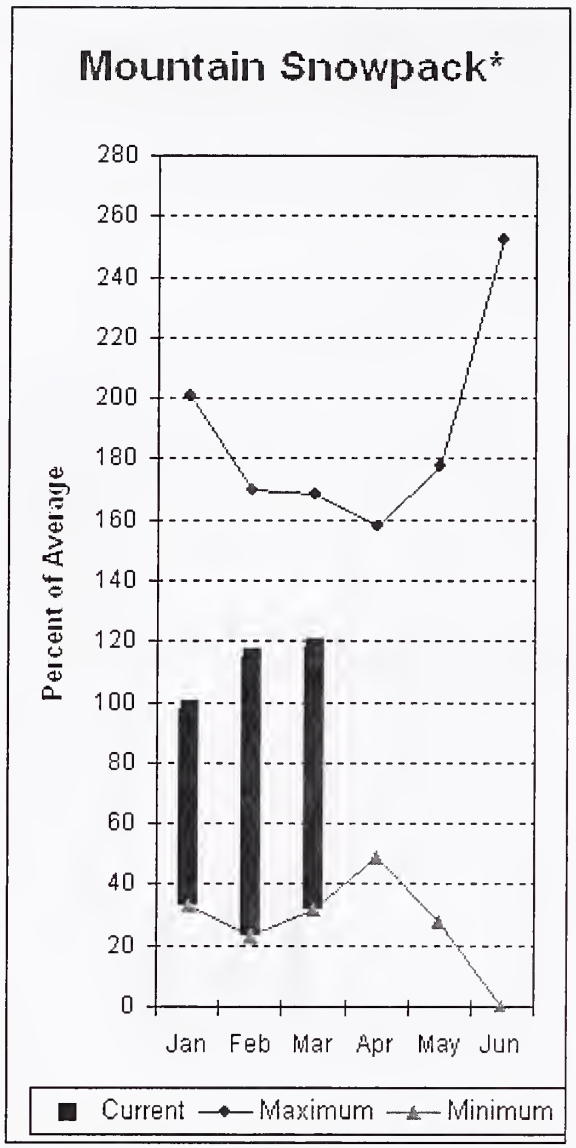
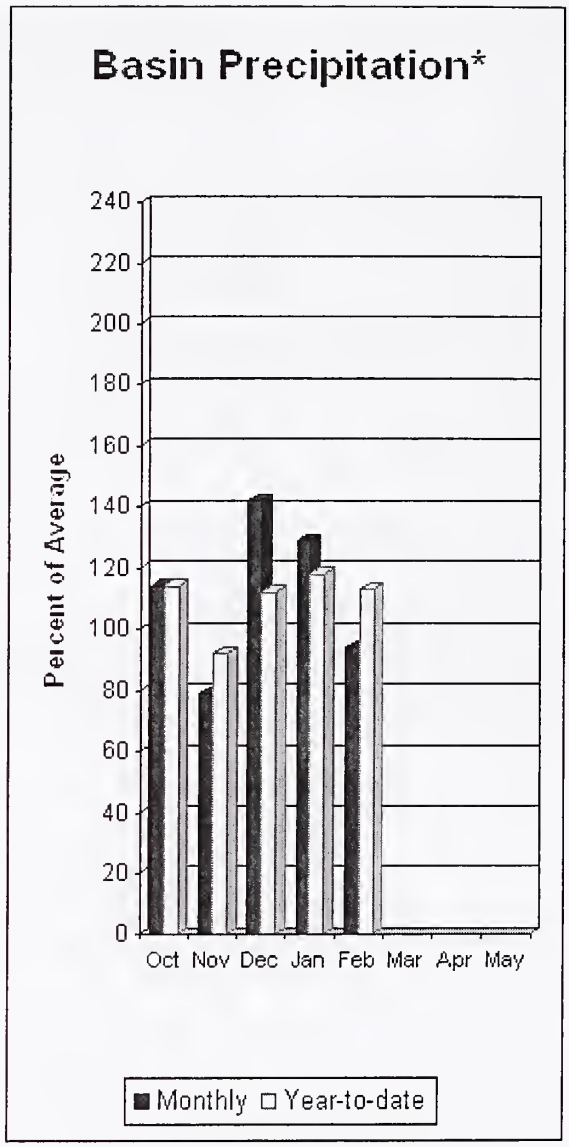
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Lower Snake River Basin





*Based on selected stations

The April - September forecast is for 113% for Clearwater River at Spalding. The Snake and Grande Ronde rivers can expect summer flows to be about 106% and 113% of normal respectively. February precipitation was 94% of average, bringing the year-to-date precipitation to 113% of average. March 1 snowpack readings averaged 118% of normal. February streamflow was 54% of average for Snake River below Lower Granite Dam and 49% for Grande Ronde River near Troy. Dworshak Reservoir reported current storage at 101% of average and 65% of capacity. Average temperatures were 3 degrees above normal for February and near average for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Grande Ronde R at Troy	MAR-JUL	1360	1660	1800	114	1940	2240	1580
	APR-SEP	1150	1430	1550	113	1670	1950	1370
Clearwater R at Spalding	APR-JUL	6620	7880	8450	114	9020	10300	7430
	APR-SEP	6950	8280	8880	113	9480	10800	7850
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	15700	20700	23000	107	25300	30300	21600
	APR-SEP	17400	23000	25600	106	28200	33800	24100

LOWER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

LOWER SNAKE RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LOWER SNAKE, GRANDE RONDE	11	147	118

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
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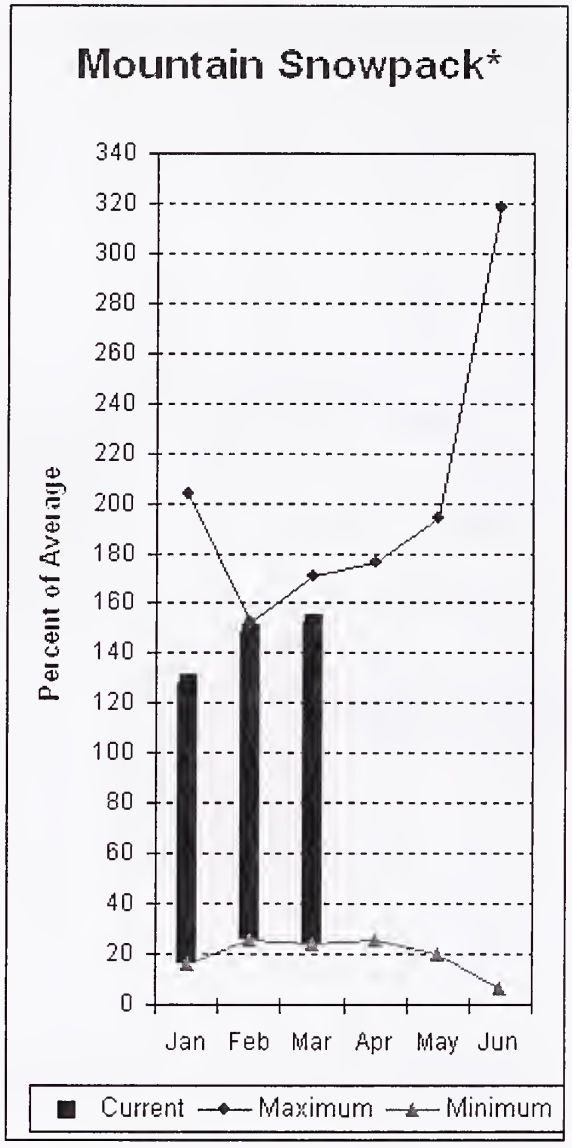
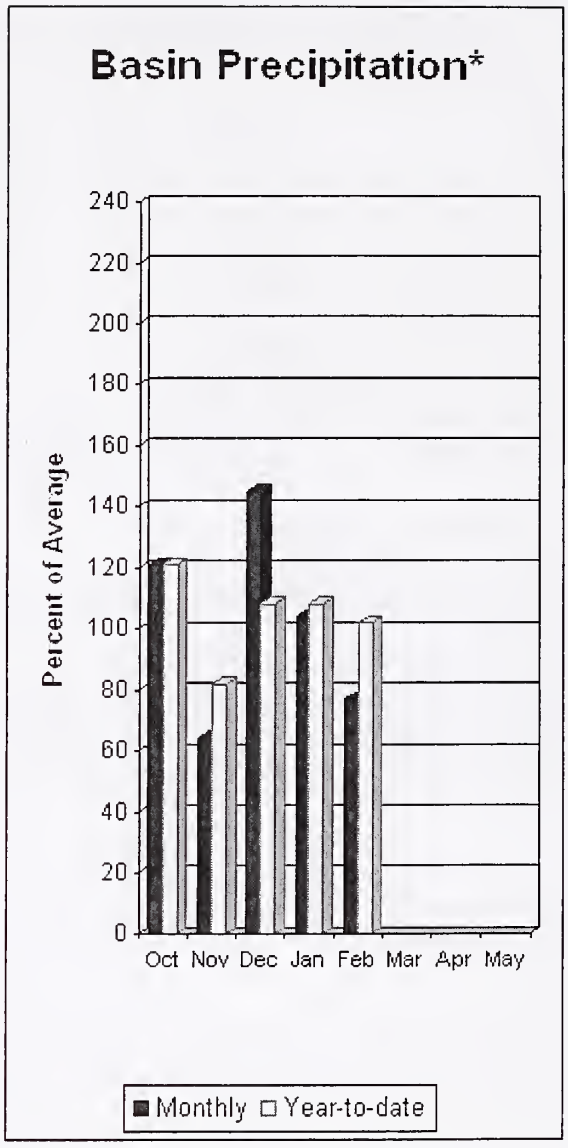
The value listed under 70% is actually a 75% exceedance level.

Cowlitz - Lewis River Basins





*Based on selected stations

Forecasts for April – September streamflows within the basin are Lewis River at Ariel, 119% and Cowlitz River at Castle Rock, 119% of average. The Columbia at The Dalles is forecasted to have 101% of average flows this summer. February average streamflow for Cowlitz River was 71% and 57% for Lewis River. The Columbia River at The Dalles was 60% of average. February precipitation was 77% of average and the water-year average was 102%. March 1 snow cover for Cowlitz River was 144%, and Lewis River was 161% of average. Average temperatures have been 2 degrees above normal during February and near normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Columbia R at The Dalles (1,2)	APR-JUL	67800	79900	85400	101	90900	103000	84600
	APR-SEP	82300	94400	99900	101	105000	118000	98600
KLICKITAT near Glenwood	APR-JUL	131	142	150	119	158	169	126
	APR-SEP	173	185	194	119	205	215	163
LEWIS at Ariel (2)	APR-JUL	990	1130	1230	119	1330	1470	1031
	APR-SEP	1160	1300	1400	119	1500	1640	1176
COWLITZ R. bl Mayfield Dam (2)	APR-JUL	1660	1870	2010	119	2150	2360	1689
	APR-SEP	1860	2110	2280	119	2450	2700	1922
COWLITZ R. at Castle Rock (2)	APR-JUL	2230	2460	2620	114	2780	3010	2295
	APR-SEP	2560	2820	3000	114	3180	3440	2639

COWLITZ - LEWIS RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MOSSYROCK	0.0	962.4	1249.8	---
SWIFT	0.0	427.3	659.1	---
YALE	0.0	342.4	337.6	---
MERWIN	0.0	384.5	394.7	---

COWLITZ - LEWIS RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

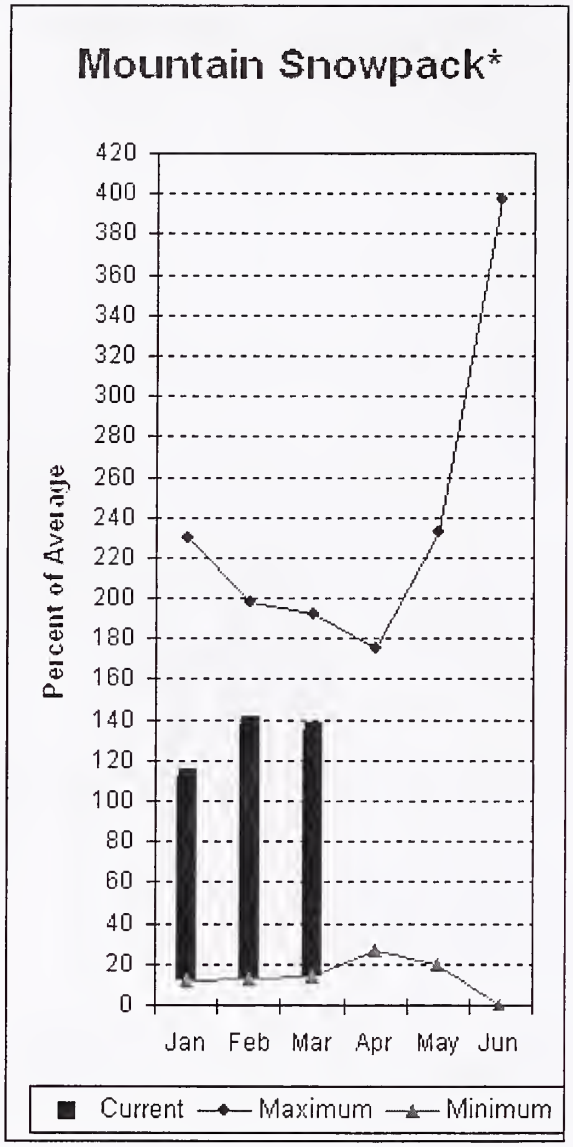
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
LEWIS RIVER	5	130	161
COWLITZ RIVER	6	121	144

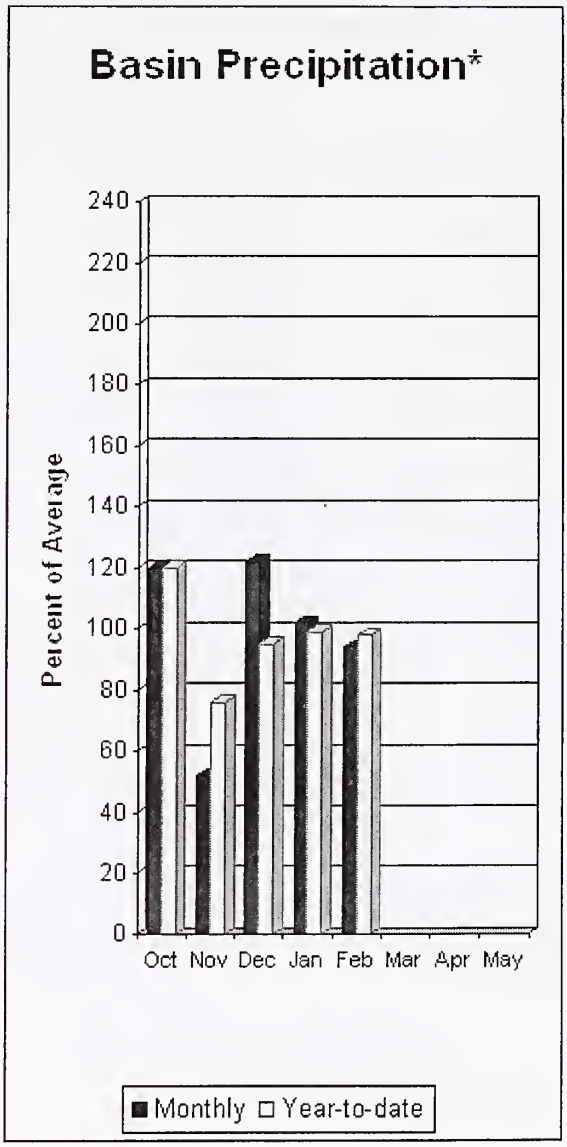
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level.

White - Green River Basins





*Based on selected stations

Summer runoff is forecast to be 125% of normal for the Green River below Howard Hanson Dam and 119% for the White River near Buckley. March 1 snowpack was 113% of average for the White River, 136 % for Puyallup River and 157% in the Green River Basin. Water content on March 1 at Corral Pass SNOTEL, at an elevation of 6,000 feet, was 32.4 inches. This site has a March 1 average of 29.5 inches. February precipitation was 94% of average, bringing the water year-to-date to 98% of average for the basins. Average temperatures in the area were 1 degree above normal for February and 1 degree below for the water-year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WHITE near Buckley (1,2)	APR-JUL	435	495	525	119	555	615	440
	APR-SEP	525	600	635	119	670	745	534
GREEN R below Howard Hansen (1,2)	APR-JUL	210	275	305	126	335	400	243
	APR-SEP	235	305	335	125	365	435	268

WHITE - GREEN - PUYALLUP RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

WHITE - GREEN - PUYALLUP RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WHITE RIVER	3	105	113
GREEN RIVER	7	126	157
PUYALLUP RIVER	5	126	136

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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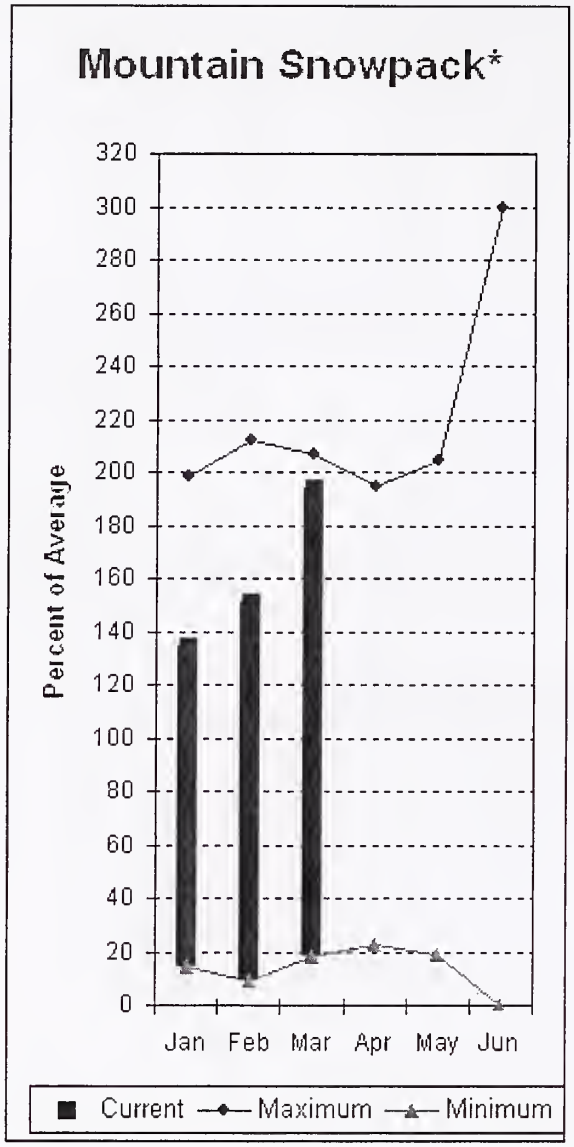
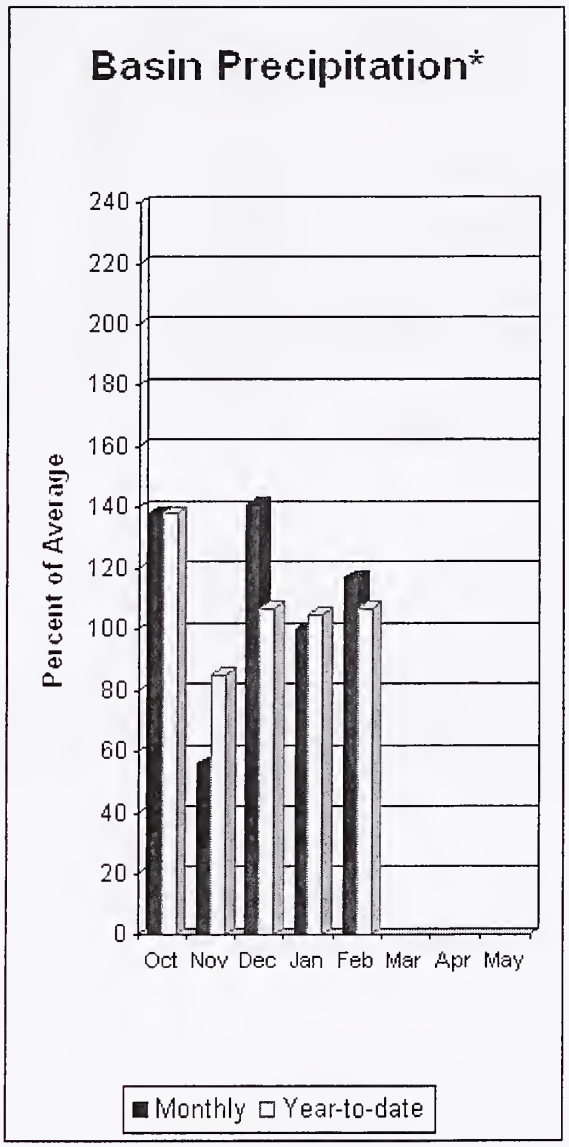
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Central Puget Sound River Basins





*Based on selected stations

Forecast for spring and summer flows are: 138% for Cedar River near Cedar Falls; 139% for Rex River; 117% for South Fork of the Tolt River; and 130% for Cedar River at Cedar Falls. Basin-wide precipitation for February was 117% of average, bringing water-year-to-date to 107% of average. March 1 average snow cover in Cedar River Basin was 219%, Tolt River Basin was 217%, Snoqualmie River Basin was 177%, and Skykomish River Basin was 161%. Rex River SNOTEL site, at 3960 feet, had 62.2 inches of water content. Average March 1 water content is 23.9 inches at Rex River. Rex, Meadows Pass, Mt. Gardner, Alpine Meadows and Skookum Creek SNOTEL sites all set new record high water content levels for March 1. Temperatures were 1 degree above average for February and 1 degree below normal for the water-year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CEDAR near Cedar Falls	APR-JUL	83	93	100	137	107	117	73
	APR-SEP	93	103	110	138	117	127	80
REX near Cedar Falls	APR-JUL	28	32	35	140	38	42	25
	APR-SEP	31	36	39	139	42	47	28
CEDAR RIVER at Cedar Falls	APR-JUL	74	87	96	130	105	118	74
	APR-SEP	73	86	95	130	104	117	73
SOUTH FORK TOLT near Index	APR-JUL	13.8	15.8	17.2	117	18.6	21	14.7
	APR-SEP	16.3	18.4	19.8	117	21	23	16.9

CENTRAL PUGET SOUND RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

CENTRAL PUGET SOUND RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

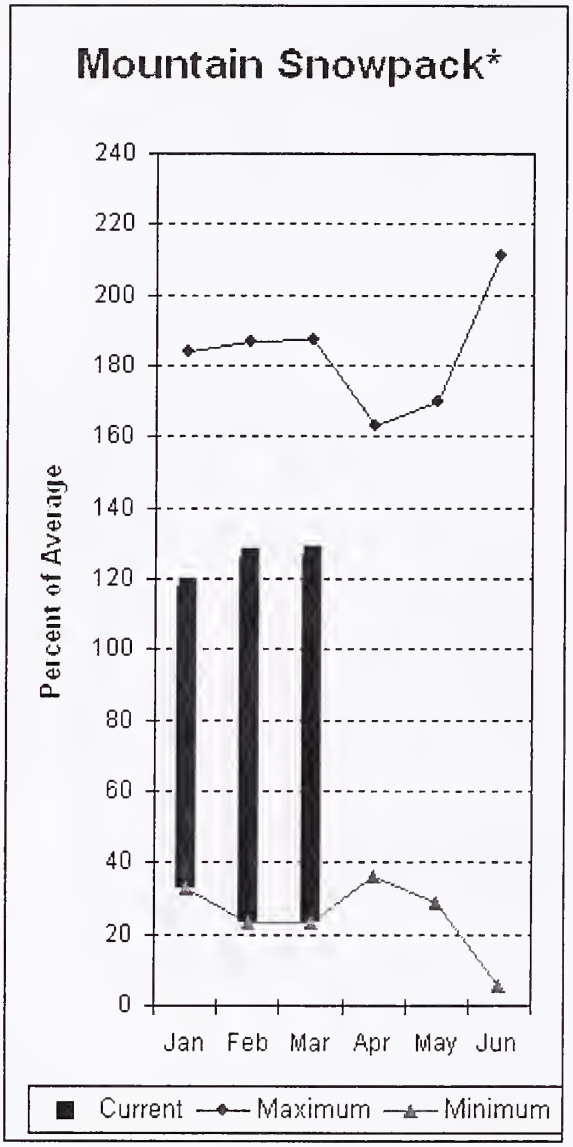
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CEDAR RIVER	6	154	219
TOLT RIVER	3	156	217
SNOQUALMIE RIVER	5	142	177
SKYKOMISH RIVER	3	137	161

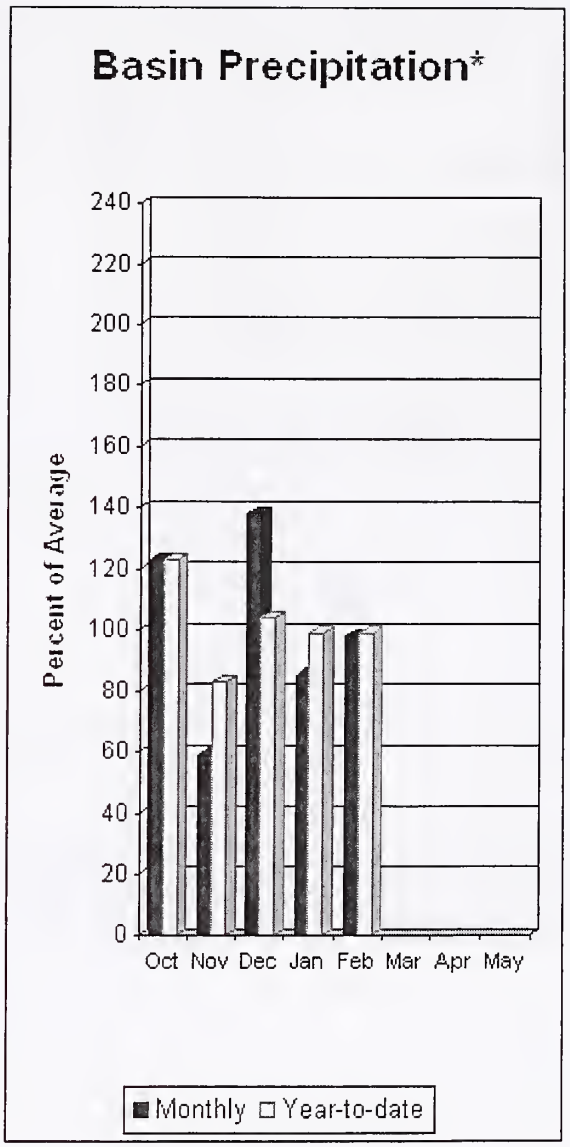
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

North Puget Sound River Basins





*Based on selected stations

Forecast for Skagit River streamflow at Newhalem is 104% of average for the spring and summer period. February streamflow in Skagit River was 65% of average. Other forecast points included Baker River at 109% and Thunder Creek at 110% of average. Basin-wide precipitation for February was 98% of average, bringing water-year-to-date to 99% of average. March 1 average snow cover in Skagit River Basin was 112%, and Nooksack River Basin was 136% and the Baker River was 133%. Marten Lake Aerial Marker, at 3,600 feet, had 84.6 inches of water content and 188 inches of snow depth. Average March 1 water content is 61.9 inches at Rainy Pass. March 1 Skagit River reservoir storage was 87% of average and 52% of capacity. Average temperatures for February were near normal for the basin and 1 degree below average for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
THUNDER CREEK near Newhalem	APR-JUL	220	240	255	109	270	290	234
	APR-SEP	325	350	365	110	380	405	333
SKAGIT at Newhalem (2)	APR-JUL	1690	1830	1930	104	2030	2170	1864
	APR-SEP	2070	2210	2310	104	2410	2550	2217
BAKER RIVER near Concrete	APR-JUL	740	835	900	109	965	1060	828
	APR-SEP	925	1050	1140	109	1230	1360	1050

NORTH PUGET SOUND RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ROSS	1404.1	697.3	813.8	818.3
DIABLO RESERVOIR	90.6	87.3	87.1	85.7

NORTH PUGET SOUND RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

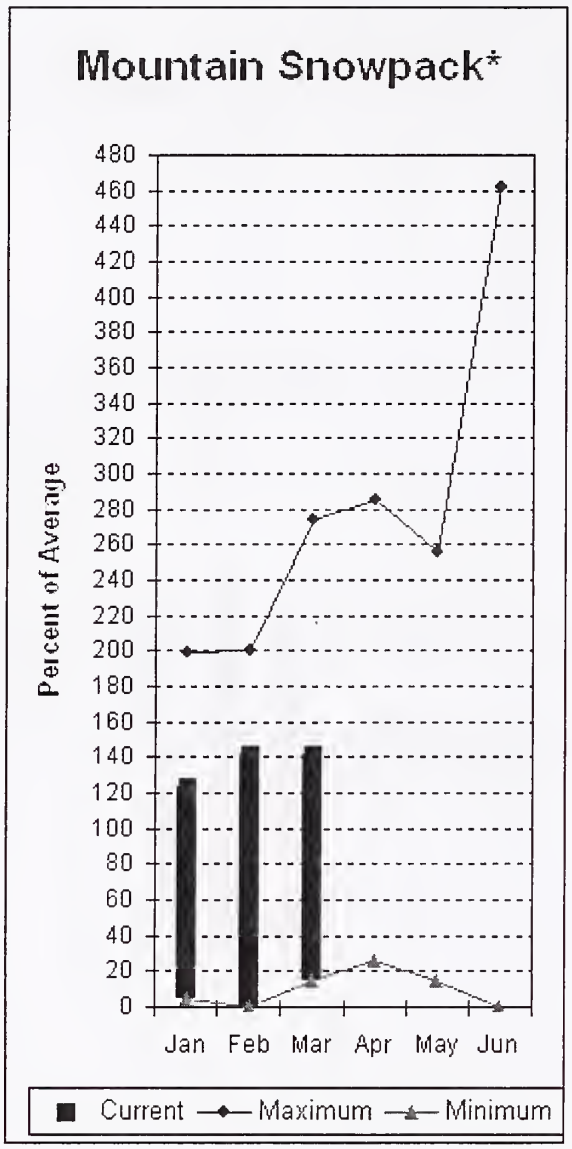
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SKAGIT RIVER	16	100	112
BAKER RIVER	9	97	133
NOOKSACK RIVER	2	103	136

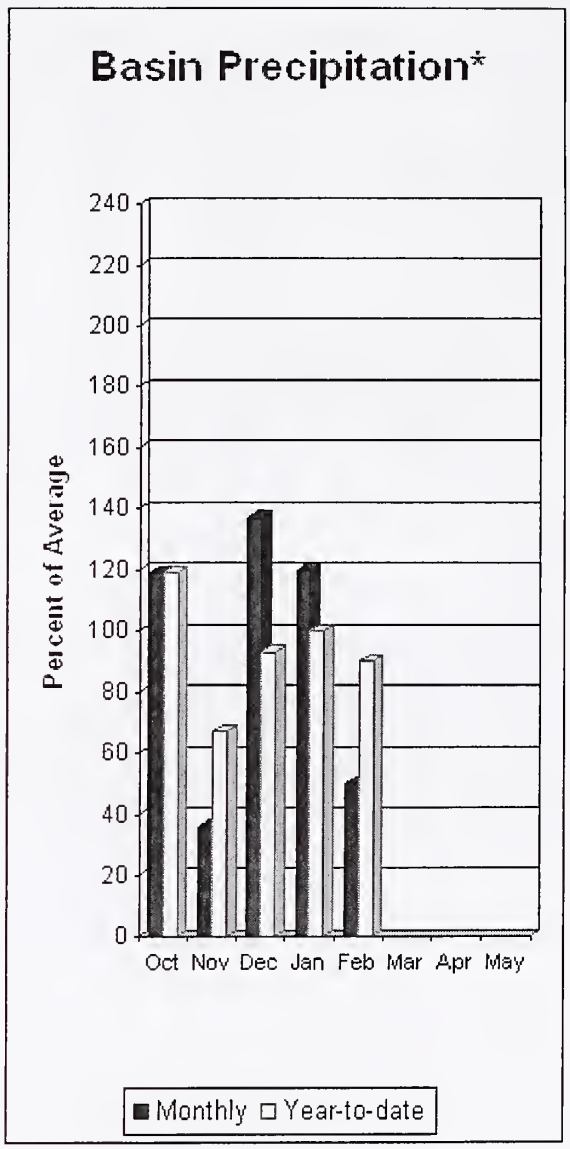
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Olympic Peninsula River Basins





*Based on selected stations

Forecasted average runoff for streamflow for the Dungeness and Elwha rivers is 115% and 115% respectively. February runoff in the Dungeness River was 41% of normal. Big Quilcene and Wynoochee rivers should expect near to slightly above average runoff this summer also. February precipitation was 50% of average. Precipitation has accumulated at 90% of average for the water year. February precipitation at Quillayute was 7.92 inches. The thirty-year average for February is 12.35 inches. Olympic Peninsula snowpack averaged 141% of normal on March 1. Temperatures were 1-2 degrees above average for February and 1 degree below for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - March 1, 2008

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DUNGENESS near Sequim	APR-JUL	128	137	143	115	149	158	124
	APR-SEP	154	167	175	115	183	196	152
ELWHA near Port Angeles	APR-JUL	425	460	480	115	500	535	419
	APR-SEP	510	550	580	115	610	650	503

OLYMPIC PENINSULA RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

OLYMPIC PENINSULA RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
OLYMPIC PENINSULA	5	105	141

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level.
The value listed under 70% is actually a 75% exceedance level.

Issued by

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The Following Organizations Cooperate with the Natural Resources Conservation Service in Snow Survey Work*:

Canada	Ministry of Sustainable Resources
	Snow Survey, River Forecast Centre, Victoria, British Columbia
State	Washington State Department of Ecology
	Washington State Department of Natural Resources
Federal	Department of the Army
	Corps of Engineers
	U.S. Department of Agriculture
	Forest Service
	U.S. Department of Commerce
	NOAA, National Weather Service
	U.S. Department of Interior
	Bonneville Power Administration
	Bureau of Reclamation
	Geological Survey
	National Park Service
	Bureau of Indian Affairs
	Recourse Conservation & Development Councils
Local	City of Tacoma
	City of Seattle
	Chelan County P.U.D.
	Pacific Power and Light Company
	Puget Sound Power and Light Company
	Washington Water Power Company
	Snohomish County P.U.D.
	Colville Confederated Tribes
	Spokane County
	Yakama Indian Nation
	Whatcom County
	Pierce County
	Kalispel Tribe of Indians
	Spokane Indian Tribe
	Jamestown S'klallum Tribe
Private	Okanogan Irrigation District
	Wenatchee Heights Irrigation District
	Newman Lake Homeowners Association
	Whitestone Reclamation District

*Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

U.S. DEPARTMENT of AGRICULTURE
CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY

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Washington Water Supply Outlook Report

Natural Resources Conservation Service
Spokane, WA